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# Pension System in Slovenia

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# PENSION SYSTEM IN SLOVENIA

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E-edition

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**Pension System in Slovenia**

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# 1    INTRODUCTION

The primary aim of our study is to provide a comprehensive overview of the historical evolution and future projections of the Slovenian pension system. Our investigation will delve into the key milestones and changes that have shaped its development over time. Additionally, we aspire to conduct a rigorous assessment of the long-term financial sustainability of the Slovenian pension system. Through predictive analysis, we aim to offer insights into the future trajectory of the system's financial health.

This study addresses several **research questions** pertaining to the Slovenian pension system. Firstly, we aim to evaluate the appropriateness of past changes to the system, specifically in terms of long-term sustainability. Secondly, we seek to understand the impact of demographic changes on the pension system, recognizing the evolving demographic landscape. Thirdly, we endeavour to assess the current long-term sustainability of the Slovenian pension system in its existing form. Lastly, we investigate the present significance of the second pension pillar and explore strategies to enhance its role in ensuring pension adequacy and bolstering the overall sustainability of the pension system. By addressing these research questions, our study aspires to contribute valuable insights that can inform policymakers and stakeholders involved in shaping the future trajectory of the Slovenian pension system.

Our **research methodology** involves a comprehensive approach, incorporating a review of legislation, existing literature, and the use of official EU demographic projections (EUROPOP-2019) alongside financial projections for the pension system. We employ results of the advanced models, such as the European Commission's cohort model and the cohort models of the 1st and 2nd pension pillars developed by the Institute for Economic Research. Additionally, we utilize the dynamic microsimulation pension model from the same institute. This methodology ensures a thorough examination of the Slovenian pension system, contributing meaningful insights to the discourse on pension sustainability and demographic challenges.

The study offers critical insights into the Slovenian pension system, uncovering key findings that bear significant implications for its future trajectory. Notably, our research indicates that while past modifications to the system, particularly in the calculation of the pension base and indexation formula, have aimed at curbing the long-term growth of pension expenditures, they fall short of being entirely sufficient. Emphasizing the importance of addressing both pension adequacy in terms of its relationship to average wage and the long-term sustainability of the system, our findings underscore the need for additional changes in the future. Moreover, our study highlights the critical role of demographic changes, emphasizing their pivotal impact on a pension system predominantly built upon the PAYG concept.

Overall, the **results** indicate that the current form of the Slovenian pension system is not sustainable in the long term. The necessity for additional modifications becomes apparent, particularly in addressing both the adequacy of pensions and the long-run public-finance sustainability of the system. Our study underscores the urgency for comprehensive reforms to safeguard the system's

effectiveness and financial viability in the face of evolving demographic dynamics and long-term fiscal considerations. This insight sheds light on the imperative for strategic adjustments to ensure the continued resilience and adequacy of the Slovenian pension system.

Currently, Slovenia has a multi-pillar pension system. There is no zero pillar, but before 2012 a system of state pensions existed that could be classified as a zero pillar. State pensions were paid to people over 65 who had lived in Slovenia for a certain period and had received incomes below a given census threshold, although they never paid any social contributions. In 2012, the state pension was transformed into a social benefit and transferred from the pension system to the social protection system, in line with the objective of removing all rights without any basis in paid contributions from the pension system.

The first pension pillar in Slovenia is the classic Bismarck's pay-as-you-go (PAYG) pension system, a compulsory pension, and invalidity insurance scheme run by the Pension and Disability Insurance Institute of Slovenia (PDIIS).

Compulsory pension and disability insurance provide the following rights:

> › The right to receive old-age, early old-age, disability, widower's, partial widower's, survivors', and partial pension;
> › Rights based on the remaining capacity of the disabled to work, namely the right to occupational rehabilitation, the right to transfer to another position, the right to work part-time, and the right to the corresponding benefits (i.e. benefits before getting another suitable job, due to part-time work, lower pay for another suitable position, benefits for occupational rehabilitation, partial disability pension, temporary benefits, disability benefits, partial benefits); and
> › The right to the annual allowance, and the assistance and attendance allowance.

The Slovenian pension system has always been based on two principles: the principle of redistribution and the principle of solidarity. Both principles are implemented by limiting the maximum pension base, which means a significantly lower replacement rate for high earners, while at the same time ensuring that the contribution base is not capped, as is the practice in most countries. In addition, solidarity is provided by accruing the pension from the minimum pension base and taking only part of the pension qualifying period into account, rather than the entire period, when calculating the pension base.

The second pension pillar in Slovenia consists of mandatory, and voluntary supplementary pension insurance. It is funded, which means that the amount of the supplementary pension depends not only on the premiums paid but also on the pension fund's return, with a guaranteed return.

The Pension and Disability Insurance Act of 1999 (from now on referred to as ZPIZ 1) had already replaced the insurance period with a bonus with mandatory supplementary pension insurance. It is an occupational pension for workers in arduous and hazardous jobs that cannot be performed successfully after a certain age.

A special subset of this system is the mandatory occupational pension scheme for public employees, regardless of the nature of their jobs, which was introduced in 2002.

Voluntary supplementary pension insurance can be held either in the form of individual insurance, whereby the individual joins a pension plan and pays the premium, or collective insurance, whereby the individual enters the policy through his or her employer, who finances all or part of the insurance for all employees. It is encouraged through tax relief, which is a crucial advantage over other forms of savings. By paying premiums, the individual acquires the right to a supplementary retirement annuity (pension). The 2012 Pension and Disability Insurance Act (from now on referred to as ZPIZ 2) introduced a life-cycle investment policy. The pension fund manager allocates members according to their age from a fund with a more aggressive investment policy to a fund with a less aggressive investment policy. In addition, the ZPIZ-2 makes it impossible to spend saved funds in an unintended way.

The third pension pillar – the personal pension scheme, which is accessible independently of the employment relationship – is poorly developed in Slovenia and there are almost no analyses available. A comprehensive definition of what belongs to the third pillar is lacking, and the available data covers only a part of it. In 2016 there were 9.767 insured persons (with pension and annuity insurance according to the Insurance Act providing life annuity pay-outs), 6.966 of whom paid premiums (an average monthly premium was at EUR 66.8 or 4.2% of the gross average salary, while an average saved amount was EUR 15.752). With some additions to the life insurance (endowment insurance, mixed insurance, annuity insurance, other life insurance, unit-linked life insurance, and capital redemption insurance), these numbers would be substantially higher, with 154.428 insured persons added whose monthly premium paid averaged EUR 267.2 per month in 2016 (SIA, 2016a, 2016b).

After a brief description of the Slovenian pension system in the introductory chapter, a presentation of the historical development of the first pillar follows in the second chapter. The third chapter deals with the projections of the expenditure of the first pension pillar presented in the latest Report on Population Aging for 2021. The fourth chapter summarizes and makes some recommendations regarding the measures needed for the new pension reform. The second pension pillar is described in the fifth chapter and summarized in the sixth chapter, which draws attention to the necessity of considering the role of both pillars while simultaneously considering the long-term sustainability of the pension system. The last, seventh, chapter briefly summarizes the most important findings.

# 2 HISTORICAL DEVELOPMENT OF THE FIRST PENSION PILLAR[1]

## 2.1 THE STATUTORY REGULATION BEFORE 2000[2]

Pensions as we know them today were first introduced in Germany in 1889. The German social insurance model has spread gradually, despite extensive promotion by Germany and much public debate. By 1910, only Austria had introduced the system of old-age pensions based on compulsory social contributions. A method of financing pensions from general taxes was introduced in Denmark in 1891, New Zealand in 1898, Australia, and the UK in 1908. The rapid development of social insurance schemes in the late 19th century and the first half of the 20th century can be attributed to industrialisation, urbanisation, increased life expectancy, and political changes towards democratisation (Feldstein and Liebman, 2001).

The first attempts to introduce social insurance in Slovenia were made during the Austro-Hungarian monarchy in 1906. During the period of the Kingdom of Serbs, Croats, and Slovenes, the first real social insurance was introduced, with the adoption of the Social Insurance of Workers Act in 1922. After the end of the Second World War in Yugoslavia, social insurance became one of the fundamental rights. The Pension and Disability Insurance Act, adopted in 1983 (Prijatelj, 2000), can be considered the first Slovenian pension act. Pensions were understood as remuneration for past work, so they were indexed to salary growth rather than the living cost. The Act also introduced benefits that had no basis in contributions, such as income support and assistance and attendance allowance. Additionally, it also introduced new concepts: minimum and maximum pension bases. This Act allowed retirement under very favourable conditions. Women with 35 years of pension qualifying period and men with 40 years of pension qualifying period could retire regardless of their age. The required age for men was 60 and for women 55, provided they had at least 20 years of the pension qualifying period. Early retirement was possible at the stated age (60 or 55) and with the minimum pension qualifying period – albeit with temporary deductions, which disappeared when the person reached the statutory retirement age. The best ten consecutive years were considered for the calculation of the pension base. The positive impact on male and female pensioners was highly significant, with the old-age pension benefit ratio (average old-age pension to average salary) increasing from 66.5% in 1985 to 80.4% in 1988, as can be seen in Table 1. The economic situation at the time was deteriorating due to the recession, numerous bankruptcies, and the then ongoing restructuring of the corporate sector, which made the generous pension system a strong incentive to retire as early as possible and to rapidly increase the number of pensioners (Majcen et al., 2005).

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[1]  This chapter is based on Kump et al. 2017.

[2]  For a comprehensive study of the Slovenian pension system development before 2000 see Stanovnik, 2002.

*Table 1: Main indicators of the first pension pillar in the Slovenian pension system in the period 1970-1989*

| Year | The ratio of insured persons to the pensioner | Pension expenditure as the % of GDP | The old-age pension benefit ratio |
|------|------|------|------|
| 1970 | 3.32 | - | 62.6 |
| 1975 | 3.51 | - | 67.8 |
| 1980 | 3.66 | 7.3 | 73.5 |
| 1985 | 2.94 | 6.8 | 66.5 |
| 1988 | 2.68 | 7.8 | 80.4 |
| 1989 | 2.52 | 8.7 | 80.0 |

*Source: Majcen et al., 2005.*

In 1990, high replacement rates (the first pension relative to the last salary before retirement) and rising pension expenditure led to a change in the valorisation method. In March 1991, a maximum old-age pension benefit ratio of 85% was set. The ratio of pensions to salaries was reduced, but pension expenditure continued to rise rapidly due to the significant increase in the number of male and female pensioners. A reform of the pension system was needed and was implemented in March 1992 with the adoption of The Pension and Disability Insurance Act (ZPIZ). Unfortunately, the tightening of retirement conditions was too late, as companies, when restructuring in the post-independence period, had already largely solved their problems with surplus labour force by early retirement. At the same time, the pension reform was not ambitious enough, as retirement conditions were not sufficiently tightened. The required pension qualifying period was no longer an adequate condition for retirement, as the age requirement also had to be met, with age gradually increasing from 55.5 to 58 years in 1998 for men and from 50.5 to 53 years for women. The age condition for early retirement has not been raised. The purchase of additional years of insurance period was quite frequent, as the purchase cost was low, and the number of both male and female pensioners was increasing even faster.

Main indicators of the Slovenian pension system in the period between 1992 and 1999 are presented in Table 2.

*Table 2: Main indicators of the first pension pillar in the period between 1992 and 1999*

| Year | Number of all pensioners | Number of old-age pensioners | The old-age pension benefit ratio | Pension expenditure as the % of GDP |
|------|------|------|------|------|
| 1992 | 419.805 | 248.978 | 77.8 | 11.41 |
| 1993 | 430.291 | 255.985 | 73.9 | 11.76 |
| 1994 | 432.915 | 257.298 | 75.4 | 11.84 |
| 1995 | 437.051 | 259.253 | 76.2 | 11.39 |
| 1996 | 442.105 | 262.142 | 74.6 | 11.19 |
| 1997 | 448.753 | 266.854 | 74.3 | 11.20 |
| 1998 | 454.626 | 271.490 | 74.5 | 11.22 |
| 1999 | 460.280 | 276.255 | 75.8 | 11.25 |

*Source: PDIIS, 2006–2022.*

## 2.2   THE STATUTORY REGULATION AFTER 2000

Shortly after adopting the ZPIZ act in 1992, the government planned to tighten the pension rules further. It also addressed other shortcomings of the legislation; for example, the possibility to insure for a narrower range of benefits was abolished, and the insurance base for the self-employed was fixed. In 1996, the preparations for the next pension reform began. After a long coordination process among the coalition and social partners, it was brought into force in 1999 with the new Pension and Disability Insurance Act - ZPIZ-1. This Act slightly tightened the retirement conditions and brought the retirement conditions for men and women closer together. It increased the retirement age for women to 58 years and their pension qualifying period to 38 years, which was only two years less than the required pension qualifying period for men. The statutory retirement age for men remained at 63, while it was raised to 61 for women. The tightening of retirement conditions, especially for women, indirectly resulted in higher pensions due to longer working careers. However, the ZPIZ-1 Act allowed for the ability for early retirement, with the possibility of lowering the retirement age (due to childcare, entry into compulsory insurance before the age of 18, and mandatory military service), and the possibility of purchasing the pension qualifying period. All these options were widely used by the generations that retired before 2012.[3]

The number of the best consecutive years considered for the pension base calculation increased from 10 to 18 years. The maximum possible ratio between two comparable pensions was reduced from 4.8:1 to 4:1. The ZPIZ-1 Act increased actuarial fairness by introducing pension deductions for retirement before retirement age and pension supplements for retirement after that age. This Act also reduced pensions overall. For example, under the ZPIZ Act, a man who retired with 40 years of the pension qualifying period (without deductions due to age) received a pension equal to 85% of the pension base, whereas, under the 1992 ZPIZ-1 Act, the pension was 72.5% of the pension base. On the other hand, a woman, under the same conditions, received a pension of 75.5% of the pension base under the ZPIZ-1 Act compared to the previous 85% under the ZPIZ Act for 35 years of the pension qualifying period. The differences in the accrual rates between men and women have been considerably reduced compared to the previous Act. In addition to the calculation of the pension base predicated on salaries over a longer period (18 consecutive years instead of 10) and the reduction in accrual rates, the valorisation of salaries in the calculation of the pension base was also less favourable than under the ZPIZ act.[4]

However, the ZPIZ-1 Act not only affected the pensions of new pensioners but also had a significant impact on the pensions of existing pensioners. Based on the principle of horizontal equality, i.e. ensuring equality between pensioners who retired at different points in time, the pensions of existing pensioners were adjusted to the pensions of new pensioners.[5]

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3   The lowering of the retirement age limit due to caring for children has also been widely used by men.
4   The Act introduced these changes gradually, so transitional periods were set in place.
5   The principle of horizontal equality meant that two pensioners who received the average salary over time but retired at different times had to have the same pension.

The pensions of existing pensioners were reduced since the new pensioners had lower accrual rates.[6] In practice, this was done by lowering the indexation of pensions for existing pensioners. Due to the principle of horizontal equality, new pensioners also received lower pensions, and it can even be claimed that their actual accrual rates were lower than those explicitly prescribed by law. Namely, in 2012 the first pension was 26.8% lower than it would have been if the pension base and accrual rates had been considered. The accrual rates were relatively high, but the ZPIZ-1 Act reduced them significantly in a highly non-transparent way.

The data in Table 3 show that the number of pensioners has increased every year, despite Act ZPIZ 1, which has only slightly slowed down the growth in the number of pensioners. Most pensioners are by far old-age pensioners, but also disability, survivors' and widower's pensioners account for a significant share. Between 2000 and 2012, the number of all pensioners increased by 25.2%, while the number of old-age pensioners increased by 42.4%. The annual growth rate of the number of old-age pensioners increased between 2000 and 2012, reaching around 4% per year between 2009 and 2019 (almost 5% in 2011). This high increase in the number of old-age pensioners can be attributed to the economic crisis and the associated redundancies, the retirement of baby boomers, and the announcements of changes to the pension legislation.

*Table 3: Main indicators of the first pension pillar in the period 2000–2022*

| Year | Number of all pensioners | Number of old-age pensioners | Number of disability pensioners | Number of survivors' pensioners* | Number of widower's pensioners | The old-age pension benefit ratio | Pension expenditure as the % of GDP |
|---|---|---|---|---|---|---|---|
| 2000 | 467,448 | 281,993 | 97,804 | 86,976 | 663 | 75.3 | 11.41 |
| 2001 | 474,507 | 287,902 | 97,704 | 84,260 | 4,617 | 73.2 | 11.00 |
| 2002 | 483,898 | 295,271 | 97,621 | 81,688 | 9,285 | 72.8 | 10.84 |
| 2003 | 491,911 | 302,303 | 97,433 | 78,818 | 13,295 | 71.1 | 10.64 |
| 2004 | 497,826 | 308,348 | 96,556 | 76,038 | 16,789 | 70.2 | 10.44 |
| 2005 | 504,988 | 314,983 | 96,665 | 73,254 | 19,977 | 69.1 | 10.78 |
| 2006 | 511,174 | 322,617 | 96,115 | 69,735 | 22,569 | 68.6 | 10.37 |
| 2007 | 518,805 | 332,616 | 94,511 | 65,601 | 25,913 | 67.1 | 9.73 |
| 2008 | 527,933 | 342,786 | 93,389 | 62,624 | 28,928 | 67.1 | 9.91 |
| 2009 | 538,455 | 354,270 | 92,123 | 59,699 | 32,119 | 66.6 | 10.91 |
| 2010 | 552,561 | 368,615 | 91,051 | 57,097 | 35,531 | 64.7 | 11.30 |
| 2011 | 569,951 | 386,263 | 90,219 | 54,409 | 38,708 | 63.4 | 11.44 |
| 2012 | 585,408 | 401,642 | 89,384 | 52,069 | 41,915 | 62.1 | 11.74 |
| 2013 | 602,311 | 417,916 | 88,361 | 51,870 | 43,672 | 61.7 | 11.77 |
| 2014 | 608,885 | 426,083 | 87,250 | 48,781 | 46,097 | 61.0 | 11.55 |
| 2015 | 612,018 | 431,745 | 85,749 | 44,904 | 48,820 | 60.2 | 10.88 |

6    The pension is equal to the product of the pension base and a percentage (rate) based on the length of the pension qualifying period. This percentage is called the accrual rate.

| Year | Number of all pensioners | Number of old-age pensioners | Number of disability pensioners | Number of survivors' pensioners* | Number of widower's pensioners | The old-age pension benefit ratio | Pension expenditure as the % of GDP |
|---|---|---|---|---|---|---|---|
| 2016 | 613,683 | 435,339 | 84,045 | 42,098 | 50,412 | 59.5 | 10.51 |
| 2017 | 615,681 | 440,247 | 81,995 | 39,139 | 52,043 | 58.4 | 10.03 |
| 2018 | 617,299 | 445,236 | 79,982 | 36,360 | 53,093 | 58.5 | 9.77 |
| 2019 | 620,459 | 451,499 | 78,131 | 33,814 | 53,857 | 58.0 | 9.59 |
| 2020 | 624,735 | 458,765 | 76,480 | 31,420 | 54,468 | 57.0 | 10.72 |
| 2021 | 624,768 | 463,509 | 73,717 | 28,903 | 54,773 | 56.9 | 9.95 |
| 2022 | 628,082 | 470,501 | 71,376 | 26,775 | 55,226 | 59.3 | 9.56 |

Note: * The average number of survivors' pensioners has been decreasing over the years, mainly due to the division of the existing right into two entitlements: a survivors' pension and a widower's pension, introduced by the ZPIZ-1. This division makes it impossible to compare the number of survivors' pensioners between the years objectively. The number of beneficiaries is generally decreasing and the increase is only due to the inflow of new survivors' pensioners, but not the widower's pensioners, which are shown separately.

*Source: PDIIS, 2006–2022.*

The Act ZPIZ-1 has sharply reduced pensions by lowering the accrual rates, considering a longer period for the pension base calculation for new pensioners and indexing pensions for less than the salary growth. While the average old-age pension was just about 25% below the average net salary in 2000, it was only 62.1% of the average net salary in 2012.

At the end of 2012, the new Pension and Disability Insurance Act, ZPIZ-2, was adopted and it entered into force in 2013. ZPIZ-2 gradually raised the statutory retirement age for women to 65 (with a transitional period ending in 2015), thus equalising the retirement conditions for men and women. It introduced pension supplements for retirement after the full retirement age (bonuses) and permanent deductions for retirement before the full retirement age (maluses). However, there is still the possibility of early retirement (without deductions or reduction of pensions granted) at the age of 60 if the person has accumulated 40 years of the pension qualifying period without any purchase (of the insurance period). These changes have been gradually introduced in an extended transition period ending in 2019.

Setting the pension qualifying period without purchase as a condition for retirement without maluses at age 60 has significantly tightened the entry conditions and reduced the impact of the purchased pension insurance period on the age of retirement. An individual who is 60 years old and has 40 years of the insurance period with some purchased insurance years (thus not having the entire 40 years of the pension qualifying period) may retire early according to ZPIZ-2, but he or she will permanently receive a reduced pension due to maluses. However, the Slovenian pension system still allows for some reduction of the retirement age (valid for entitlement to an old-age pension) without deductions for childcare, compulsory military service (by two-thirds of its actual duration) and entry into compulsory insurance before the age of 18. The retirement age may be reduced for the care of each child born or adopted for whom the insured person has cared during

the child's first year; by six months for one child, 16 months for two children, 26 months for three children, 36 months for four children and 48 months for five or more children. The Act also sets the condition that a woman is entitled to the age limit reduction unless a man has enjoyed the right to parental leave. However, the ZPIZ-2 Act limits the possibility to reduce the retirement age more than the ZPIZ-1 Act since the right to reduce the retirement age can only be exercised when the beneficiary has reached 38 or 40 years of their pension qualifying period without purchase. Besides, the age limit for reduction is set relatively high. In this way, the opportunities for early retirement are significantly reduced.

The ZPIZ-2 Act has abolished the principle of horizontal equality, and therefore, the accrual rates stated in the Act are significantly lower than those in the ZPIZ-1 Act. This only means that the accrual rates are transparent, and pensions are not reduced "in a hidden way" by the lag factor – pension growth being behind the salary growth. When the Act was adopted in 2012, the ZPIZ-2 Act still maintained higher accrual rates for women than for men. For 15 years of the pension qualifying period, the pension under ZPIZ-2 is accrued at 26% (male) or 29% (female), with 1.25% added for each additional year. Thus, at 40 years of the pension qualifying period, a male would be entitled to an accrual rate of 57.25%, and a female would be entitled to 60.25%. The ZPIZ-2 Act foresaw a reduction in the accrual rates for women during the transitional period, which was expected to last until the end of 2022. Between 2013 and 2016, the accrual rate for women was 29% for 15 years of the pension qualifying period and 1.41% for each year after that, resulting in 64.25% at 40 years. Between 2017 and 2019, it was 29% for 15 years of the pension qualifying period and 1.38% for each year after that, resulting in 63.5% at 40 years.

The ZPIZ-2 Act introduced new measures to encourage deferred retirement (staying in the labour market for as long as possible after the retirement conditions are met). If insured persons remained employed after completing the minimum requirements for (old-age or early) retirement, they were entitled to a 1% higher accrual rate for every three additional months of the pension qualifying period. It could be exercised for a maximum of three years, thus accumulating a maximum of 12% of the additional accrual rate. Without this encouragement and more favourable valuation of pension qualifying period, if the retirement is deferred, a woman would have accumulated 4.14% of the additional accrual rate by extending her employment for three additional years in 2019, and as much as 12% due to the more favourable valuation. For a man, the difference was even more significant in 2019, as he would have collected 3.75% of the additional accrual rate without the more favourable valuation and 12% with the more favourable valuation. In addition, the ZPIZ-2 Act introduced the monthly benefit in the amount of 20% of the (early) old-age pension if the insured person remained insured or continued to be insured in the same way after having fulfilled the conditions for retirement. This benefit continued until the termination of insurance, but no later than at the age of 65.

The data in Table 3 show that the number of old-age pensioners was 4% higher at the end of 2013 than in the previous year and only 1.9% higher in 2014. In subsequent years, the number of old-age pensioners increased approximately by a percentage point. The slightly lessened increase in the number of old-age pensioners over the recent years can be attributed, but is not limited to the tightening of the legal conditions for old-age retirement. Retirement under the terms of the ZPIZ-1

was still possible for all beneficiaries who fulfilled the requirements for retirement on 31 December 2012. Thus, almost all those who fulfilled the conditions for old-age retirement retired before 2013, and for several years afterwards, fewer people were eligible for retirement under the ZPIZ-2 Act. At the same time, transitional provisions of the ZPIZ-2 postponed the full implementation of the Act to a later date. The right to retire under the ZPIZ 1 Act for those unemployed receiving unemployment benefits on 31 December 2012 also had a significant impact. Thus, in 2014, 69.8% of new female pensioners and 61.2% of new male pensioners still retired under the ZPIZ-1 Act (ZPIZ, 2014, 13). In 2016, 27% of all new female pensioners and 19% of new male pensioners retired under the ZPIZ-1 Act and in 2019, 2.5% and 1.8% respectively.

The amendment of Act ZPIZ-2B in 2016 changed the benefit of the 20% (early) old-age pension in the case of deferred retirement. Only insured persons covered by compulsory insurance on a full-time basis were eligible for the benefit and the entitlement no longer ended at the age of 65. This amendment also loosened the conditions for claiming a partial pension. Before this amendment, partial retirement was only possible if the insured remained insured for at least 4 hours a day or 20 hours a week. Since 2016, partial retirement has been possible if the insured remains insured for at least two hours a day or 10 hours a week.

In October 2017 (i.e., the amendment of the Act ZPIZ-2C), all old-age and disability pensioners who have completed the statutory pension qualifying period at the time of their retirement became entitled to a minimum pension of EUR 500.

A major change in pension legislation occurred in 2020 based on the Act Amending the Pension and Disability Insurance Act (from now on referred to as ZPIZ-2G), which was adopted at the end of 2019. This amendment gradually increases and equalises the accrual rates for men and women to 63.5% (for the initial 15 years of the pension qualifying period, the pension accrues at 29.5%, with 1.36% added for each additional year of the pension qualifying period). Until the end of 2019, the legislation still treated women more favourably than men, as they were subject to 3% higher accrual rates for the same length of the pension qualifying period. The equalisation of the accrual rates represents the continual equalisation for men and women in the context of the pension system. The 2012 reform established gender-neutral criteria or conditions for retirement, and the 2020 legislative changes also unified the pension amounts. Since the required retirement age was equal for both men and women, it was no longer possible to justify the differences in accrual rates for men and women based on differences in the required pension qualifying period. Consequently, the wage gap and other gaps between men and women in the labour market will be fully transferred into the gender pension gap. The accrual rates for men will continue to increase gradually so that the pension for men will accrue at 63.5% (for 40 years of pensionable service) by 2025.

The accrual rates increase correlates to an increase in other pensions and benefits, as these accrue according to the accrual rates used for the old-age pension. In addition to the old-age pension, the assessment of widower's, disability, and survivors' pensions, and disability insurance benefits will also increase. As the amendments also change the accrual rate for the first 15 years of the old-age pension, the minimum old-age pension for the first 15 years of insurance will also increase accordingly. This is the minimum amount to which all individuals who meet the minimum

conditions for retirement are entitled, irrespective of other circumstances. The minimum pension is now calculated as 29.5 % of the minimum pension base and no longer as 26 % of the minimum pension base. The accrual rate for determining the minimum pension will increase gradually: 27% in 2020, 27.5% in 2021, 28% in 2022, 28.5% in 2023 and 29% in 2024.

The pension assessment in the case of deferred retirement has also changed with these amendments. If the person remains insured after the conditions for retirement have been fulfilled (60 years of age and 40 years of pension qualifying period without purchase obtained), he or she receives the additional accrual rate of 1.5% for every six months of insurance, but for a maximum of 3 additional years. It means that he or she can accumulate an extra 9% of accrual rates in the three additional years (previously 12%).

The amendment to the ZPIZ-2G introduced additional accrual rates for childcare, primarily for a woman who had cared for a child in its first year. Thus, for each born or adopted child (up to a maximum of three children), female beneficiaries receive an additional 1.36% accrual rate per child when claiming their pension (up to a maximum of 4.08% in total). A male who had cared for a child, and proves that he had been on parental leave for at least 120 days is also entitled to an extra 1.36%. The additional accrual rates for children are provided alternatively with the possibility of lowering the retirement age due to the care of children.

The monthly benefit to the (early) old-age pension in the case of deferred retirement has also been changed. Insured persons who, although they meet the retirement conditions, remain insured on a full-time basis are entitled to receive 40% of the old-age pension (previously 20%) for a maximum of three years. However, after that period, the benefit drops to 20% of the old-age pension if the person remains insured.

The amendment to the ZPIZ-2G also increases disability, widower's, and survivors' pensions. The minimum accrual rate for disability pension calculation is set to 41%, irrespective of the insured person's gender (previously set at 36% for men and 39% for women; there is a transitional period). The minimum accrual rate for widower's and survivors' pensions has also increased. Until 2019, the minimum widower's or survivors' pension was calculated at a minimum of 33% of the pension base. This amendment gradually raises the minimum accrual rate to 38%.

The main features of each pension Act described in this chapter are shown in Tables 4 to 6, which show the tightening of retirement conditions, the raise in statutory retirement age, and how the retirement conditions and the method of calculating pensions for men and women have been equalised.

*Table 4: Main features of different Pension and Disability Insurance Acts (1/3)*

| 1983 | 1992 | 1999 | 2012 | 2020 |
|---|---|---|---|---|
| Retirement conditions | | | | |
| Men: p.q.p = 40 | Men[a]: age = 58, p.q.p = 40 | Men: age = 58, p. q. p. = 40 | Men[c]: age = 60, p. q. p. without purchase = 40 | Men[c]: age = 60, p. q. p. without purchase = 40 |
| Women: p.q.p = 35 | Women[a]: age = 53, p.q.p = 35 | Women[b]: age = 58, p. q. p. = 38 | Women[c]: age = 60, p. q. p. without purchase = 40 | Women: age = 60, p. q. p. without purchase = 40 |
| Men, age = 60, p.q.p = 20 | Men[a]: age = 63, p.q.p = 20 | Men: age = 63, p. q. p. = 20 | Men[c]: age = 65, p. q. p. = 20 | |
| Women: age = 55, p.q.p = 20 | Women[a]: age = 58, p.q.p = 20 | Women[b]: age = 61, p. q. p. = 20 | Women[c]: age = 65, p. q. p. = 20 | |
| Men, age = 65, i. p. = 15 | Men: age = 65, i. p. = 15 | Men: age = 65, i. p. = 15 | Men: age = 65, i. p. = 15 | Men: age = 65, i. p. = 15 |
| Women: age = 55, i. p. = 15 | Women: age = 55, i. p. = 15 | Women[b]: age = 63, i. p. = 15 | Women[c]: age = 65, i. p. = 15 | Women: age = 65, i. p. = 15 |
| Minimum insurance period | | | | |
| 15 years | 15 years | 15 years | 15 years | 15 years |
| Pension base | | | | |
| Best ten consecutive years | Best ten consecutive years | Best 18 consecutive years | Best 24 consecutive years | Best 24 consecutive years |
| Accrual rates | | | | |
| Men: 35% of pension base for the first 15 years and 2% for each additional year | Men: 35% of pension base for the first 15 years and 2% for each additional year | Men: 35% of pension base for the first 15 years and 1.5% for each additional year | Men: 26% of pension base for the first 15 years and 1.25% for each additional year | Men: 29.5% of pension base for the first 15 years, and 1.36% for each additional year, additional 1.36% for each child for whom he had taken care of in the first year |
| Women: 40% of pension base for the first 15 years, and 3 % for each additional year | Women: 40% of pension base for the first 15 years, 3% for each additional year up to 20 years, 2% for each additional year afterwards | Women: 38% of pension base for the first 15 years, and 1.5% for each additional year | Women[d]: 29% of pension base for the first 15 years, and 1.25% for each additional year | Women[d]: 29.5% of pension base for the first 15 years, and 1.36% for each additional year, additional 1.36% for each child for whom he had taken care of in the first year |

*Table 5: Main features of different Pension and Disability Insurance Acts (2/3)*

| 1983 | 1992 | 1999 | 2012 | 2020 |
|---|---|---|---|---|
| | | Pension indexation | | |
| 90% of net salary growth | Net salary growth | Net salary growth | 60% of gross salary growth plus 40% of consumer price index Must not be less than the half of consumer price index. | 60% of gross salary growth plus 40% of consumer price index Must not be less than the half of consumer price index. |
| | | Minimum pension base | | |
| 65% of average net salary | 64% of average net salary | Nominal amount (approximately 65% of average net salary) | 76.5% of average net salary | 76.5% of average net salary |
| | | Maximum pension base | | |
| 350% of average net salary | 310% of average net salary | 4 x minimum pension base | 4 x minimum pension base | 4 x minimum pension base |
| | | Early retirement | | |
| Men: age = 55, p.q.p. = 35 | Men: age = 55, p.q.p. = 35 | No legal options, but certain groups of employees can retire before minimum retirement age without pension deductionsh | Men: age = 60, p.q.p. = 40 | Men: age = 60, p.q.p. = 40 |
| Women: age = 50, p.q.p. = 30 | Women: age = 50, p.q.p. = 30 and some other conditions | | Women: age = 60, p.q.p. = 40 | Women: age = 60, p.q.p. = 40 |
| | | Deductions for early retirement (maluses) | | |
| 1.5% for each year missing until age 60 (men) or 55 (women). 0.5% for each missing year of the insurance period. Deductions are temporary until the retirement age is reached. | 1% for each missing year of the insurance period. Deductions are temporary until the retirement age is reached. | For men, between 12% and 1.2%, depending on age. The deductions are permanent. For women, deductions were foreseen but would only come into effect in 2014 due to the gradual increase in the retirement age. | For each month of missing age up to the age of 65, the pension is reduced by 0.3%. The deduction is permanent. | For each month of missing age up to the age of 65, the pension is reduced by 0.3%. The deduction is permanent. |

*Table 6: Main features of different Pension and Disability Insurance Acts (3/3)*

| 1983 | 1992 | 1999 | 2012 | 2020 |
|---|---|---|---|---|
| Pension increases for deferred retirement (bonuses) | | | | |
| | 1% for each completed year beyond the full pension qualifying period. | Depending on age (for men from 64 to 66, for women from 62 to 66), 3.6% to 7.2%. In addition, the accrual rates were higher for a pension qualifying period longer than 40 years. | For each additional year of the pension qualifying period (without a purchased period), the accrual rate is increased by 4%, up to a maximum of three years. Monthly payment of 20% of the potential pension. | For each additional year of the pension qualifying period (without the purchased period), the accrual rate is increased by 3%, up to a maximum of three years. Monthly payment of 40% of the potential pension for three years and 20% of potential pension afterwards. |
| Purchase of insurance period | | | | |
| Favourable conditions for farmers and the self-employed. In August 1990, the option was also made available to workers (in the event of bankruptcy technological surpluses, etc.) | The employer can buy up to 5 years of the insurance period for the employee (under certain conditions)[f] Insured persons can purchase insurance period for extra years of university studies and military service. | The employer can buy up to 5 years of insurance period for the employee (under certain conditions)[g] Insured persons can purchase insurance period for extra years of university studies and military service. | Possibility to purchase years of the insurance period for the years not included into pension qualifying period; up to a maximum of five years. | Possibility to purchase years of the insurance period for the years not included into pension qualifying period; up to a maximum of five years. |

Notes: Abbreviations: "p.q.p." pension qualifying period; "i. p." insurance period. (a) In the ZPIZ Act from 1992, the increase in the retirement age was gradual and completed in 1998; all figures refer to final values (b) The increase in the retirement age and pension qualifying period for women has been very gradual; the data refer to the final values, which were in some cases reached after 2015. (c) The increase in the retirement age and pension qualifying period has been very gradual; the data refer to the final values, which were in some cases reached after 2019. (d) The reduction in accrual rates is gradual, and the data refer to the final values. (e) Pension indexation under the ZPIZ-1 from 1999 was rather complex and non-transparent; it was generally limited upwards by salary increases and downwards by cost-of-living increases; pensions were further adjusted downwards (by 0.5 percentage points), as they were also adjusted to new (lower) entry pensions. (f) In the period 2010–2015, the pension indexation was limited or prevented by intervention laws due to the economic crisis. Between 2016 and 2021, pension indexation was higher than required by law. (g) "Other conditions" included bankruptcy, disability, and long-term unemployment. (h) Article 55 of the ZPIZ-1 Act from 1999. (f) Article 214 of the ZPIZ Act from 1992. (g) Articles 195-199 of the ZPIZ-1 Act from 1999

*Sources: Up to year 1999: Majcen et al, 2005, 24. From 2012 and later: Pension and Disability Insurance Act– ZPIZ, 1992; Pension and Disability Insurance Act – ZPIZ-1, 1999; Pension and Disability Insurance Act ZPIZ-2, 2012.*

The Slovenian pension system has changed relatively frequently over the recent decades. All changes made were aimed at tightening the retirement conditions (raising the retirement age, increasing the required pension qualifying period, tightening other conditions for retirement, lowering pensions) and equalising the retirement conditions for men and women. However, the actual age and completed pension qualifying period at retirement have not kept pace with the legal provisions, as shown in the data in Table 7. This table shows the gradual change in the average age at retirement and the average completed pension qualifying period of new male and female pensioners.

*Table 7: The average age at retirement and the average completed pension qualifying period of new old-age pensioners by gender, 2000–2022*

| | The average age at retirement | | | | The average completed pension qualifying period | | | |
| | Women | | Men | | Women | | Men | |
| Year | Age | Months | Age | Months | Age | Months | Age | Months |
|---|---|---|---|---|---|---|---|---|
| 2000 | 56 | 1 | 61 | 0 | 33 | 7 | 37 | 3 |
| 2001 | 56 | 2 | 62 | 0 | 33 | 11 | 37 | 1 |
| 2002 | 56 | 5 | 62 | 2 | 34 | 1 | 37 | 0 |
| 2003 | 56 | 6 | 62 | 2 | 34 | 5 | 37 | 5 |
| 2004 | 57 | 3 | 62 | 6 | 35 | 1 | 37 | 9 |
| 2005 | 57 | 3 | 61 | 8 | 35 | 4 | 38 | 0 |
| 2006 | 57 | 4 | 61 | 8 | 35 | 8 | 38 | 4 |
| 2007 | 57 | 7 | 61 | 10 | 35 | 10 | 38 | 3 |
| 2008 | 57 | 7 | 61 | 11 | 36 | 0 | 38 | 3 |
| 2009 | 58 | 1 | 62 | 0 | 35 | 8 | 38 | 2 |
| 2010 | 58 | 5 | 61 | 10 | 35 | 6 | 38 | 0 |
| 2011 | 58 | 8 | 61 | 9 | 34 | 11 | 37 | 9 |
| 2012 | 58 | 2 | 61 | 3 | 35 | 4 | 37 | 3 |
| 2013 | 58 | 6 | 60 | 11 | 36 | 1 | 37 | 11 |
| 2014 | 58 | 11 | 60 | 11 | 36 | 2 | 37 | 9 |
| 2015 | 59 | 2 | 61 | 4 | 36 | 11 | 37 | 9 |
| 2016 | 60 | 0 | 61 | 9 | 37 | 2 | 37 | 6 |
| 2017 | 60 | 4 | 62 | 3 | 37 | 3 | 36 | 7 |
| 2018 | 60 | 6 | 62 | 4 | 38 | 9 | 37 | 1 |
| 2019 | 60 | 8 | 62 | 6 | 39 | 0 | 36 | 10 |
| 2020 | 60 | 10 | 62 | 6 | 39 | 1 | 37 | 4 |
| 2021 | 61 | 6 | 62 | 8 | 38 | 5 | 36 | 11 |
| 2022 | 61 | 6 | 62 | 8 | 38 | 7 | 37 | 8 |

*Source: PDIIS, 2006–2022.*

The statutory retirement age for women set in legislation has gradually increased by four months per year since the implementation of ZPIZ-1 (1999), while the statutory retirement for men has remained unchanged. Following the adoption of the ZPIZ-2 (2012), the increase in the statutory

retirement age has continued. The actual (attained) average ages at the retirement of women did not follow the dynamics of an increase in the statutory retirement age. ZPIZ-1 gradually increased (due to transitional periods) the minimum retirement age for women from 53 years and four months in 2000 to 57 years and four months in 2012, and finally to 60 years in 2019. Thus, the minimum retirement age for women over the whole period increased by six years and eight months, while the actual average age of women at retirement increased by four years and five months. For men, the actual average age at retirement even decreased between 2000 and 2013, which can be attributed to the possibility of lowering the age limit due to childcare, military service, and the chance of reaching the minimum retirement age by purchasing the years of the insurance period. The reduction in the average age at retirement for both men and women was particularly evident when the ZPIZ-2 was being prepared and before it was adopted. People sought opportunities to retire as soon as possible, either by lowering the age or by retiring before the conditions for retirement were met, despite permanently reducing their pension. As a result of diminishing possibilities to lower the retirement age (imposed by the ZPIZ-2), the average age at retirement for both men and women finally began to rise after 2013. In 2020, men retired at an average age of just one year and eight months older than women, compared to an average of 4 years and 11 months older in 2000 or an average of 3 years and 5 months older in 2010.

The average length of the pension qualifying period for both men and women has been consistently lower than the pension qualifying period set in legislation, partly due to the legal possibilities to retire early (also) without a reduction in the pension. For example, women who retired in 2020 were on average ten months over the minimum retirement age, but their pension qualifying period was on average 11 months below the minimum pension qualifying period for early retirement. For men, the average age at retirement in 2020 was two years and six months higher than the minimum age requirement, but the average pension qualifying period was two years and eight months lower than the minimum pension qualifying period for retirement before age 65. While in 2010, women retired with an average of 2 years and 6 months shorter pension qualifying period than men, and in 2013 with a year and ten months shorter than men, in 2017 for the first time, women retired with a longer average pension qualifying period than men. In 2020, women retired with an average of one year and nine months longer pension qualifying period than men.

## 2.3   FINANCING OF THE FIRST PENSION PILLAR

In Slovenia, the first pension pillar is financed through mandatory social security contributions from employers and employees. The total contribution rate is 38.2% (the employer's share is 16.1% and the employee's 22.1%). Practically two-thirds of paid contributions, i.e., 24.35% (the employer's share amounts to 8.85% and the employee's share to 15.50%) are intended for pension and disability insurance.

An international comparison of the salary burden with all social security contributions expressed as a percentage of the GDP between 2010 and 2021 is shown in Table 8, with more detailed data for 2021 in Figure 1.

*Table 8: Social security contributions as a share of GDP (in %)*

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Slovenia** | | | | | | | | | | | | |
| Employee | 10.1 | 10.0 | 10.2 | 9.9 | 9.9 | 9.9 | 9.8 | 9.8 | 9.8 | 9.9 | 10.7 | 10.4 |
| Employer | 5.7 | 5.6 | 5.7 | 5.5 | 5.4 | 5.5 | 5.5 | 5.6 | 5.6 | 5.7 | 6.1 | 6.0 |
| Total | 15.8 | 15.6 | 15.8 | 15.5 | 15.3 | 15.4 | 15.4 | 15.4 | 15.4 | 15.6 | 16.8 | 16.4 |
| **EU 28** | | | | | | | | | | | | |
| Employee | 5.1 | 5.2 | 5.2 | 5.3 | 5.2 | 5.2 | 5.3 | 5.3 | 5.4 | 5.4 | - | - |
| Employer | 6.8 | 6.8 | 6.8 | 6.8 | 6.8 | 6.7 | 6.7 | 6.8 | 6.8 | 6.7 | - | - |
| Total | 12.0 | 12.0 | 12.1 | 12.1 | 12.1 | 11.9 | 12.0 | 12.1 | 12.2 | 12.1 | - | - |
| **EU 27** | | | | | | | | | | | | |
| Employee | 5.5 | 5.6 | 5.7 | 5.8 | 5.8 | 5.8 | 5.8 | 5.8 | 5.8 | 5.8 | 6.0 | 5.9 |
| Employer | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.4 | 7.3 | 7.3 | 7.3 | 7.2 | 7.4 | 7.3 |
| Total | 12.9 | 13.0 | 13.2 | 13.2 | 13.2 | 13.1 | 13.2 | 13.1 | 13.2 | 13.1 | 13.4 | 13.2 |
| **EA-19 (Eurozone)** | | | | | | | | | | | | |
| Employee | 5.9 | 6.0 | 6.1 | 6.2 | 6.2 | 6.1 | 6.2 | 6.2 | 6.1 | 6.1 | 6.3 | 6.2 |
| Employer | 7.9 | 7.9 | 7.9 | 7.9 | 8.0 | 7.9 | 7.8 | 7.8 | 7.9 | 7.8 | 8.0 | 7.9 |
| Total | 13.8 | 13.9 | 14.1 | 14.2 | 14.2 | 14.0 | 14.0 | 14.0 | 14.0 | 13.8 | 14.3 | 14.1 |

*Source: European commission (2022).*

*Figure 1: Social security contributions in the EU, Iceland and Norway in 2021 (% of GDP)*
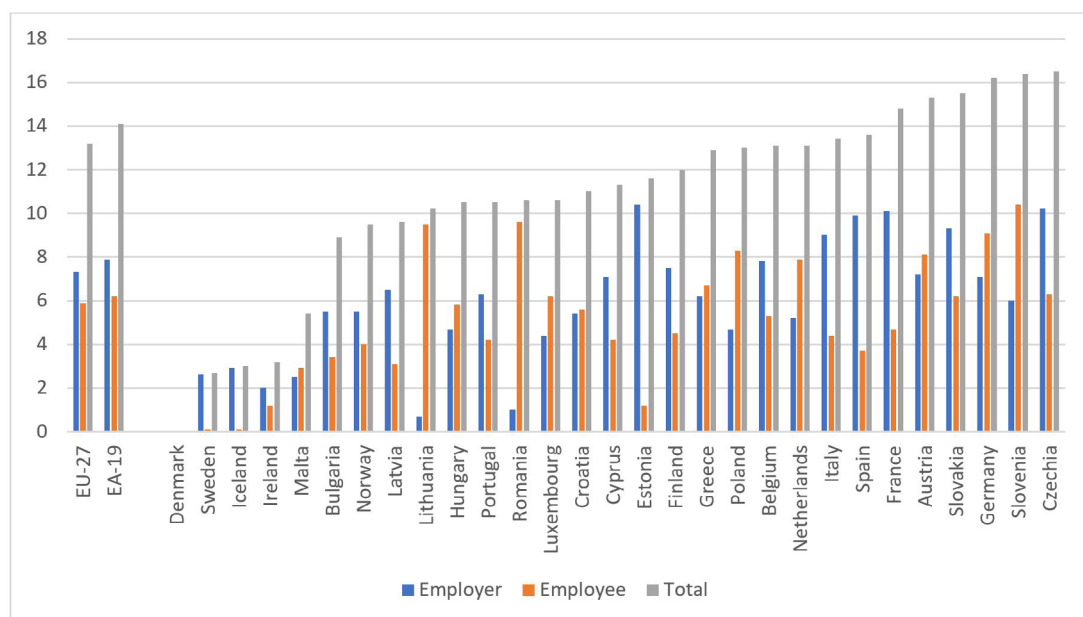


*Source: European Commission (2022).*

The burden on employees during the entire period in Slovenia is around 10 per cent of the total GDP and amounts to 10.4% in 2021, while the burden on employers is between 5.4 and 6.1% (6.0% in 2021). The total burden thus amounts to between 15.3 and 16.8%, the latter was reached in 2020, which ranks Slovenia in first place among the EU-27 countries for that year. In 2021, the total burden amounts to 16.4% which ranks Slovenia in second place.

It can be observed that, compared to the average among the EU member states, workers in Slovenia are significantly more burdened – the difference is almost double. On the other hand, the share of employers' contributions expressed in % of the GDP is slightly below the EU average in all years. Slovenia also deviates from the average in the Eurozone since social security contributions also burden the employer more than the employee. The composition of the total contribution rate of mandatory social security contributions, which has been 38.2% in Slovenia for many years, is shown in Table 9.

While the employee contribution rate for pension and disability insurance (15.50%) has been unchanged since 1994, the employer contribution rate, which was also 15.50% at the time, was reduced to the current 8.85% by 1997. The resulting shortfall in public financial resources was replaced by the former payroll tax, which was finally abolished in 2009 after a transitional period of several years of reduction.

The contribution rates shown apply to dependent employees (wage earners) and the self-employed, while Table 9 does not include contribution rates for other forms of work (author contracts, student work, etc.).

*Table 9: Levels of social security contributions in Slovenia (%)*

|  | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 2002+ |
|---|---|---|---|---|---|---|---|
| **Contributions for pension and disability** | **28.80** | **30.84** | **31.00** | **31.00** | **26.57** | **24.35** | **24.35** |
| - employees | 14.40 | 15.42 | 15.50 | 15.50 | 15.50 | 15.50 | 15.50 |
| - employers | 14.40 | 15.42 | 15.50 | 15.50 | 11.07 | 8.85 | 8.85 |
| **Contributions for health insurance** | **18.15** | **13.80** | **12.78** | **12.70** | **13.20** | **13.25** | **13.45** |
| - employees | 8.69 | 6.60 | 6.14 | 6.10 | 6.34 | 6.36 | 6.36 |
| - employers | 9.46 | 7.20 | 6.64 | 6.60 | 6.86 | 6.89 | 7.09 |
| **Employment contributions** | **3.40** | **3.40** | **1.25** | **0.80** | **0.25** | **0.20** | **0.20** |
| - employees | 1.70 | 1.70 | 0.63 | 0.40 | 0.16 | 0.14 | 0.14 |
| - employers | 1.70 | 1.70 | 0.63 | 0.40 | 0.09 | 0.06 | 0.06 |
| **Parental care protection** | **0.00** | **0.00** | **0.20** | **0.20** | **0.20** | **0.20** | **0.20** |
| - employees | - | - | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| - employers | - | - | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| **Contributions - total** | **50.35** | **48.04** | **45.23** | **44.70** | **40.22** | **38.00** | **38.20** |
| - employees | 24.79 | 23.72 | 22.36 | 22.10 | 22.10 | 22.10 | 22.10 |
| - employers | 25.56 | 24.32 | 22.86 | 22.60 | 18.12 | 15.90 | 16.10 |

*Source: Čok et al., 2021.*

Employees in a dependent employment relationship and the self-employed combined also contribute by far the largest part of the paid contributions. This can be seen in Table 10, which contains the amounts of contributions for mandatory pension and disability insurance in 2022, where employees and self-employed collectively paid 95.4% of all contributions.

*Table 10: Contributions for mandatory pension and disability insurance in Slovenia in 2022*

| Category insured persons | Paid contributions (Million EUR) | % |
|---|---|---|
| Contributions of employees of legal entities (employer's and employee's part combined) | 4,691.2 | 86.9 |
| Contributions of employees of the self-employed (employer's and employee's part combined) | 189.8 | 3.5 |
| Contributions of self-employed | 265.7 | 4.9 |
| Other[1] | 249.6 | 4.6 |
| **TOTAL** | **5,396.4** | **100.0** |

[1] The remaining contributions together include contributions from farmers, contributions from other legal bases, including occasional work of students, contributions for special cases of insurance, contributions collected from persons voluntarily included, contributions from benefits (parental, sick, unemployment), contributions from personal supplementary work.

*Source: PDIIS, 2006–2022.*

Despite the high amount of collected contributions, the mandatory contributions for pension and disability insurance are not sufficient to cover the needs of PDIIS, so a significant share of the funds covering the pension fund is contributed by the budget of the Republic of Slovenia. In 2022, transfer revenues from the state budget to PDIIS thus amounted to EUR 1,106.9 million, of which:

a) EUR 805.0 million represents a**n additional liability**, i.e., funds to cover the current deficit of the pension fund, which must be covered by the state budget in accordance with the legislation (PDIIS-2, Article 162).

b) EUR 301.9 million represents **legal obligations under special regulations (**PDIIS-2, Article 161).

*Table 11: Financial data of PDIIS (million EUR)*

| | Total income (expenses) | Social Security contributions | Main transfer income | |
| --- | --- | --- | --- | --- |
| | | | Article 162 of PDIIS-2 | Article 161 of PDIIS-2 |
| 2004 | 3,484.9 | 2,291.4 | 653.7 | 345.1 |
| 2005 | 3,661.7 | 2,547.0 | 679.7 | 352.6 |
| 2006 | 3,851.7 | 2,700.5 | 678.8 | 371.0 |
| 2007 | 4,064.6 | 2,934.1 | 644.6 | 383.5 |
| 2008 | 4,479.7 | 3,250.8 | 666.2 | 445.5 |
| 2009 | 4,653.6 | 3,288.5 | 778.5 | 459.2 |
| 2010 | 4,804.9 | 3,334.7 | 841.6 | 444.3 |
| 2011 | 4,941.0 | 3,360.5 | 1,001.4 | 441.0 |
| 2012 | 4,851.0 | 3,348.9 | 1,020.4 | 339.4 |
| 2013 | 4,949.0 | 3,269.3 | 1,201.8 | 330.0 |
| 2014 | 4,977.7 | 3,333.6 | 1,381.5 | 177.7 |
| 2015 | 4,984.1 | 3,473.6 | 1,117.9 | 298.6 |
| 2016 | 5,035.2 | 3,644.6 | 989.4 | 278.1 |
| 2017 | 5,117.2 | 3,874.2 | 915.6 | 203.8 |
| 2018 | 5,295.1 | 4,165.8 | 839.1 | 167.4 |
| 2019 | 5,510.5 | 4,465.4 | 672.2 | 246.2 |
| 2020 | 5,899.1 | 4,632.3 | 815.9 | 270.6 |
| 2021 | 6,206.8 | 5,031.7 | 718.8 | 262.7 |
| 2022 | 6,715.1 | 5,396.4 | 805.0 | 301.9 |

*Source: PDIIS, 2006–2022.*

PDIIS expenses are constantly increasing, which is mainly the result of the growth in the number of pensioners, which is shown in Table 12 below.

## 2.4  THE RATIO BETWEEN THE NUMBER OF INSURED PERSONS AND PENSIONERS

Table 12 shows the number of old-age, partial, disability, family, and widow's pension beneficiaries between 2010 and 2022. The number of old-age pension beneficiaries increased significantly during this period – by 27.6%. On the other hand, the number of recipients of disability pensions and survivors' pensions is decreasing. During the mentioned period, the number of widow's pension recipients increased significantly (by more than 55%). The total number of all pensioners increased by over 13% (from 552,561 to 628,082).

*Table 12: Number of pension receivers by year*

| Year | Old age pensioners | Partial pensioners | Disability pensioners | Survivors pensioners | Widowers pensioners | Total |
|------|--------------------|--------------------|-----------------------|----------------------|---------------------|-------|
| 2010 | 368,615 | 267 | 91,051 | 57,097 | 35,531 | 552,561 |
| 2011 | 386,263 | 352 | 90,219 | 54,409 | 38,708 | 569,951 |
| 2012 | 401,642 | 398 | 89,384 | 52,069 | 41,915 | 585,408 |
| 2013 | 417,916 | 492 | 88,361 | 51,870 | 43,672 | 602.311 |
| 2014 | 426,083 | 674 | 87,250 | 48,781 | 46,097 | 608,885 |
| 2015 | 431,745 | 800 | 85,749 | 44,904 | 48,820 | 612,018 |
| 2016 | 435,339 | 1,789 | 84,045 | 42,098 | 50,412 | 613,683 |
| 2017 | 440,247 | 2,257 | 81,995 | 39,139 | 52,043 | 615,681 |
| 2018 | 445,236 | 2,628 | 79,982 | 36,360 | 53,093 | 617,299 |
| 2019 | 451,499 | 3,158 | 78,131 | 33,814 | 53,857 | 620,459 |
| 2020 | 458,765 | 3,602 | 76,480 | 31,420 | 54,468 | 624,735 |
| 2021 | 463.509 | 3,866 | 73,717 | 28,903 | 54,773 | 624,768 |
| 2022 | 470.501 | 4,204 | 71,376 | 26,775 | 55,226 | 628,082 |

*Source: PDIIS, 2006–2022.*

On the other hand, the growth in the number of insured persons, which is mainly the result of favourable economic trends in the last years of the period in question, lags behind the increase in the number of pensioners. As can be seen in Table 13, the groups of insured persons who contribute the largest share of contributions, i.e., in the case of employees at legal entities, the number increased by 15.3 %, the number of self-employed by 34.4 %, while at the same time the number of employees of the self-employed decreased by 20 %.

*Table 13: Average number of insured persons by year*

| Year | Employees of legal entities | Employees of the self-employed | Self-employed | Farmers | Voluntary insured | Unemployed | Students (part-time) work | Parents | Other legal bases Total | Of these, pupils and students | Other categories | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2010 | 685,733 | 61,461 | 59,825 | 8,129 | 21.3000 | 28,288 | 128 | 16,366 | - | - | 762 | 881,992 |
| 2011 | 671,812 | 57,238 | 61,258 | 7,371 | 21,303 | 33,200 | 64 | 16,862 | - | - | 761 | 869,869 |
| 2012 | 662,552 | 54,491 | 60,823 | 6,760 | 23,223 | 30,017 | - | 16,858 | - | - | 818 | 855,542 |
| 2013 | 647,585 | 51,139 | 61,395 | 6.231 | 17,191 | 28,887 | - | 19,692 | - | - | 1,001 | 833.121 |
| 2014 | 652,557 | 50,483 | 64,351 | 5,942 | 13,568 | 23,192 | - | 20,732 | 3,212 | - | 9,521 | 843,558 |
| 2015 | 662,316 | 50,761 | 66,845 | 5,633 | 11,656 | 20,328 | - | 21,998 | 26,007 | 23.206 | 9,870 | 875,414 |
| 2016 | 680,214 | 50,312 | 68,654 | 5,387 | 10,043 | 19,942 | - | 22,232 | 24,082 | 22,474 | 10,136 | 891.002 |
| 2017 | 704,318 | 50,973 | 70,198 | 5,100 | 8,779 | 19,009 | - | 22,068 | 23,248 | 22,481 | 10.62 | 914,313 |
| 2018 | 729,257 | 50,946 | 71,443 | 4,890 | 8,249 | 17,566 | - | 21,548 | 21,428 | 20,921 | 13,822 | 939,149 |
| 2019 | 749,191 | 52,719 | 72,712 | 4,645 | 7,998 | 16,745 | - | 20,935 | 21,312 | 20,841 | 14,498 | 960,700 |
| 2020 | 758,364 | 50,455 | 75,842 | 4,448 | 7,911 | 23,768 | - | 20,391 | 15,976 | 15,645 | 993 | 958,148 |
| 2021 | 769,355 | 48,666 | 77,585 | 4,272 | 7,784 | 17,879 | - | 19,710 | 18,949 | 18,615 | 802 | 965,002 |
| 2022 | 790,625 | 49,222 | 80,399 | 4,113 | 7,802 | 14,390 | | 20,004 | 21,748 | 21,341 | 760 | 989,063 |

*Source: PDIIS, 2006–2022.*

The result of these trends is the deterioration of the ratio between insured persons and all pensioners, which is shown in Table 14 and Figure 2. Between 2010 and 2014, the ratio fell from 1.60 insured per one pensioner to 1.39. Since 2015, it has been increasing due to the more favourable economic conditions and amounted to 1.57 in 2022. It should be emphasized that from 2014 onwards, insured persons based on other legal relationships are also included in the calculation of the ratio. If they are not considered in the calculation for the purpose of an equal comparison between 2010 and 2022, the movement of the ratio is similar, and its value in 2022 is 1.54.

*Table 14: Ratio between insured persons and pensioners by years*

| Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ratio [1] | 1.60 | 1.53 | 1.46 | 1.38 | 1.39 | 1.43 | 1.45 | 1.49 | 1.52 | 1.55 | 1.53 | 1.54 | 1.57 |
| Ratio without insured based on other legal relationships | 1.60 | 1.53 | 1.46 | 1.38 | 1.35 | 1.39 | 1.41 | 1.45 | 1.49 | 1.51 | 1.51 | 1.51 | 1.54 |

[1] Since 2014, insured persons based on other legal relationships have also been included among the insured persons.

*Source: PDIIS, 2006–2022.*

*Figure 2: Relationship between insured persons and pensioners by years*
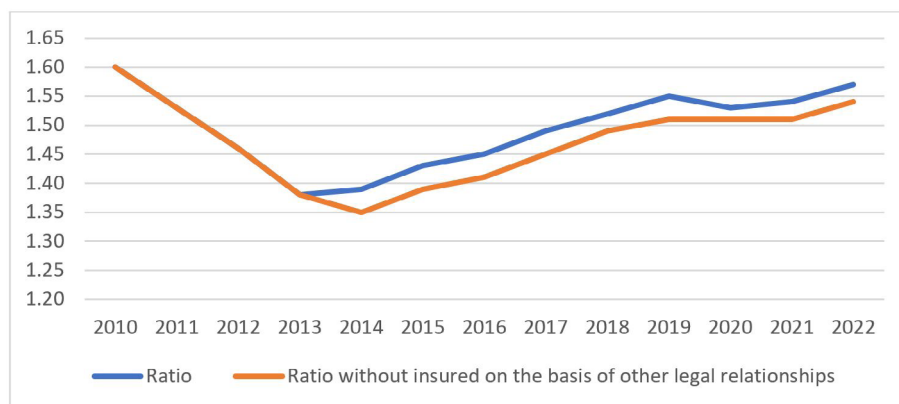


*Source: PDIIS, 2006–2022.*

## 2.5   DEMOGRAPHIC CHANGES

The population of Slovenia is ageing rapidly, and it will continue to do so in the future decades. This will put a large strain on the Slovenian pension system. To shed light on the Slovenian demographic development, we will first present the development of fertility, mortality, and migration in the past, but also their future trajectories that have been assumed in the latest population projections done by EUROSTAT. It turns out that ageing is very persistent in the population projections because of the current population age structure. As a result, an additional strong increase in the elderly bracket is projected even when varying assumptions on fertility, mortality, and migration.

### 2.5.1   Fertility

The development of fertility over time is usually analysed using the "total fertility rate" (TFR) indicator. It is an average number of children that would be born to a woman over her reproductive life assuming that she would: a) survive to the end of her reproductive life, and b) at each age experience the same age-specific fertility rates as women at different ages in the year for which this indicator was calculated. In 1980, Slovenia had, for the last time, recorded a total fertility rate of 2.1 children per woman, which is considered the average needed for the population to reproduce in the long run if there is no migration. A sharp decline in fertility followed during the 1980s and 1990s, reaching the bottom in 2003 with a TFR of only 1.2 children. Thus, that year the TFR was just about half of what is needed for the population to reproduce in the long run. After 2003, the TFR indicator started to recover and reached 1.53 in 2008. Thereafter, it gradually stabilised at around 1.6 children per woman (see Figure 3).

*Figure 3: Total fertility rate (TFR) and number of births between 1980 and 2070 (actual data for 1980 to 2018 and assumptions from EUROSTAT's population projections for 2019 to 2070)*
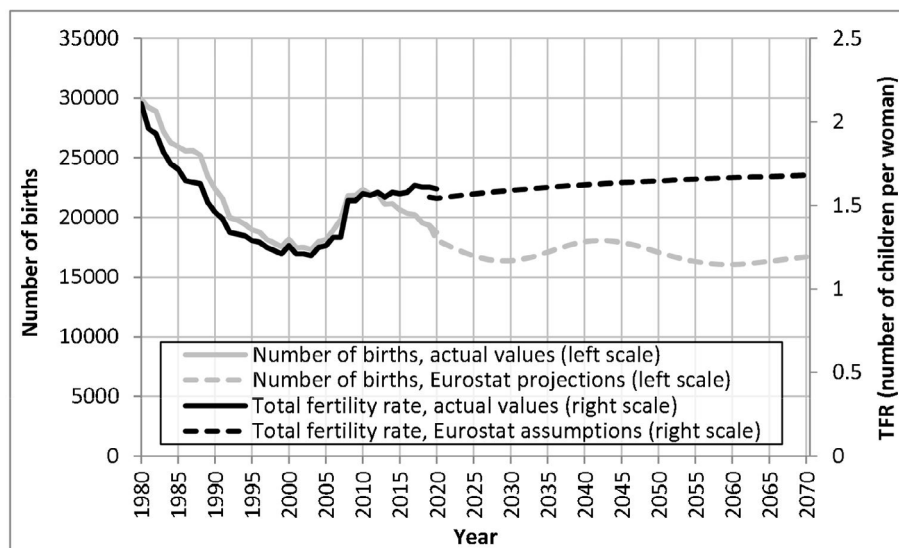


*Source: Statistical Office of the Republic of Slovenia, 2022; EUROSTAT, 2020.*

A large share of the described drop in the TFR can be explained by the increasing women's mean age at birth. From 1984 to 2010, it increased from 25.3 years to 30.3 years. Thus, over 26 years it increased by 5 years, which is on average about 0.2 years per year. In other words, in that period every fifth woman postponed the birth of a child for one year – to the next calendar year. Therefore, 20% fewer children were born each year compared to initial trends.

The good news is that the number of children never went as low as 1.2 children in Slovenia. If we exclude this "tempo" effect factor with the demographic methods – e.g., Sambt & Žilnik (2011) – we find that the tempo-adjusted fertility rate has never fallen below 1.6 children per woman. Still, the fact remains that between 1984 and 2010, on average around 20 thousand children were born per year, instead of the 25 thousand that would have been born if there had been no fertility postponement to the higher age of women. These births are already missing from the working age population, and will become even more evident in the future decades. Fewer women of reproductive age will also lead to fewer births in the future.

Figure 3 also includes the number of live births (left scale). The trajectory of live births is very similar to the pattern of the TFR (right scale), but their divergence becomes obvious from around 2010 onwards. Namely, the number of live births does not depend only on the level of TFR but also on the age structure of the population – in particular, it correlates to the number of women of childbearing age.

Between the 1980s and 1990s when fertility was strongly declining, the trajectory of births and the trajectory of the TFR indicator were very similar since the number of women of childbearing age was not yet decreasing. Around 2010, it became increasingly apparent that a declining number of women born in the 1980s was entering the childbearing age. Therefore, after 2010, the trajectory of the number of live births has been falling below the total TFR trajectory.

Although EUROSTAT assumes that the TFR will be slightly increasing throughout the next few decades, the number of births is strongly declining in the first decade shown in the projections, and thereafter, it fluctuates between 16 and 18 thousand new-borns per year. Thus, in Slovenia, there will be a low number of children and working-age individuals in the upcoming decades due to the low fertility rates in the last three to four decades.

## 2.5.2   Mortality

In the last 180 years, the highest life expectancy at birth has almost doubled. It increased from about 45 years for Swedish women in 1840 (Roser, 2019) to 87.7 years for Japanese women in 2020 (OECD, 2021). The increase in life expectancy is about 2.5 years every 10 years, which is about 6 hours a day. In Slovenia, the life expectancy at birth for both genders combined increased from 71.2 years in 1982 to 81.6 in 2019 (EUROSTAT, 2020). Thus, the increase was on average 0.28 years annually, which is almost 7 hours a day.

*Figure 4: Life expectancy at birth (e$_0$) in Slovenia from 1982 to 2018 (actual values) and 2019 to 2070 (assumptions used in EUROSTAT population projections)*
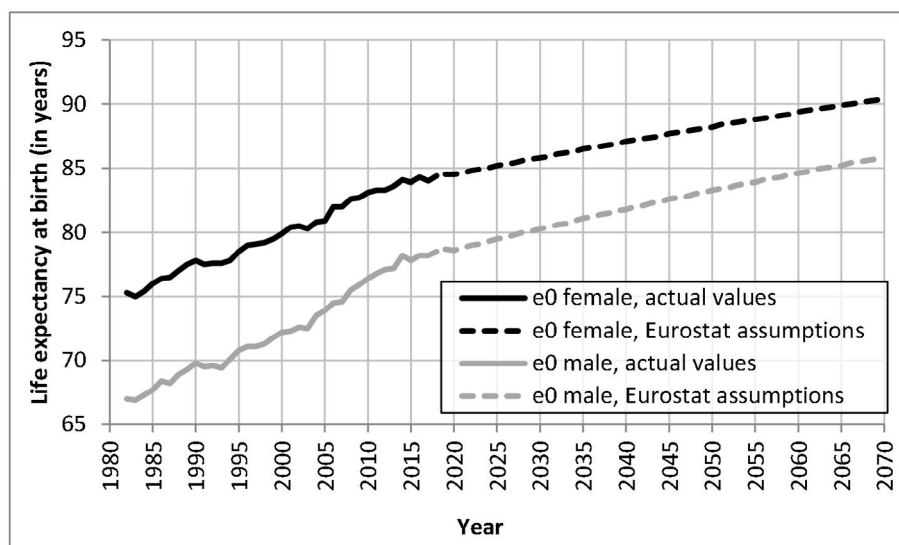


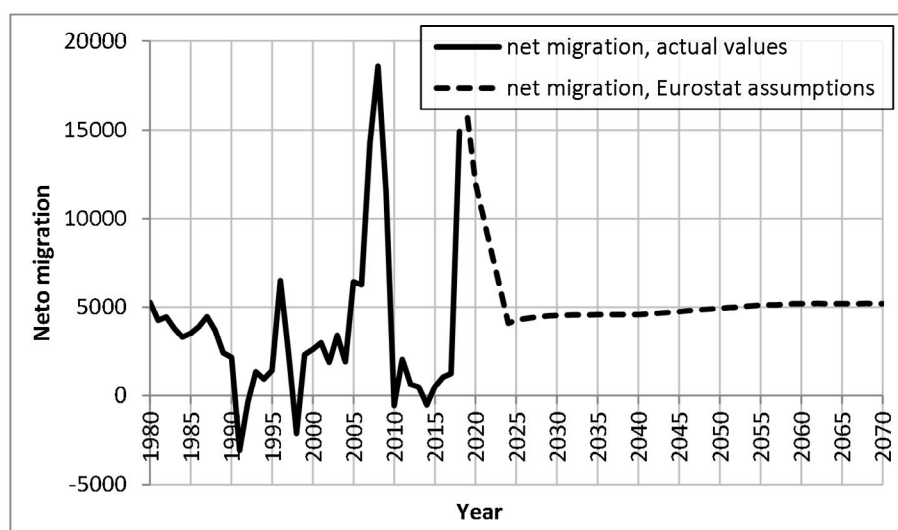*Source: EUROSTAT, 2020; EUROSTAT, 2022.*

In the population projections, EUROSTAT suggests that life expectancy will continue to increase gradually from 78.7 years in 2016 to 84.6 in 2060 for males and from 84.5 years to 89.4 for females. In 2020, life expectancy dropped by a little over one year in Slovenia due to the COVID-19 pandemic, but in a year or two, it should be back in line with the trend from pre-COVID-19 times. During the Spanish flu (namely between 1918 and 1920) life expectancy fell much more than due to COVID-19, and after 1920, it returned to the trajectory of rapid growth from the times before the Spanish flu.

The rapid increase in life expectancy is a remarkable achievement of humankind and we should be very happy about it. It is especially encouraging that the healthy life expectancy at birth is increasing as well – in Slovenia, for example, from 58.2 years in 2005 to 60.9 in 2019 (EUROSTAT, 2021). However, this also brings challenges in the form of demographic pressure on public finance systems that provide income and services to the elderly. These are mainly the health care and long-term care systems, and especially the pension system if it is structured on the pay as you go principle, which is the case in Slovenia.

### 2.5.3 Migration

When analysing migration as a factor of demographic change, we usually focus on the net migration value, which is defined as immigration minus emigration. Thus, net migration value shows how many more people immigrate to an area compared to those who emigrate from that area. Figure 3 presents the net migration values for Slovenia between 1990 and 2018, whereas for the period between 2019 to 2060, the values are from EUROSTAT's population projections (EUROSTAT, 2020).

*Figure 5: Net migration for Slovenia between 1990 and 2018 (actual values) and from 2019 to 2060 (assumptions used in EUROSTAT's population projections)*



*Source: Statistical Office of the Republic of Slovenia, 2022a; EUROSTAT, 2020.*

The average net migration value for the period between 1980 and 2018 is 3,601. In the year 1991, when Slovenia gained its independence, there was a negative influx of people, since many were returning to their homes in other republics of Yugoslavia. Between 1992 and 2020 net migration has been the primary source of population growth in Slovenia with an average increase of 7,718 individuals per year. The natural increase (i.e., the difference between the number of births and the number of deaths), which is the other possible source of population change, amounted to only 260 people per year on average during this period. We also see a significant fluctuation every year. The net migration was exceptionally high between 2007 and 2009 but later declined sharply because of the economic crisis. Between 2010 and 2017, the average net migration was only 624 people per year, while in the period between 2018 and 2020, Slovenia again witnessed very high net migration values between 15 and 19 thousand per year, which is similar to the levels recorded between 2007 and 2009.

In the future, EUROSTAT assumes a gradual decline from the very high levels in 2018 to 4.1 thousand in 2024, and thereafter a slight increase is assumed to reach 5.2 thousand in 2060. These positive net migrations are crucial for mitigating the fall in the population size in Slovenia and for mitigating the even stronger population ageing and rapidly increasing old-age dependency ratio during the projection period.

## 2.5.4   Population age structure and projections

EUROSTAT's population projections are built on the data for the population by age and gender at the beginning of 2019. This starting population then changes during the projection period in line with the assumptions on future trajectories of fertility, mortality, and net migration presented above as aggregate indicators. Each of these indicators contains the distribution by age and gender for each year of the projection period – except for fertility, which is relevant only for females. Figure 6 shows the population of Slovenia by age and gender on January 1st 2022.

*Figure 6: Population pyramid for Slovenia, 1 January 2022; three different shades indicate three economically relevant age groups: 0–19, 20–64 and 65+*
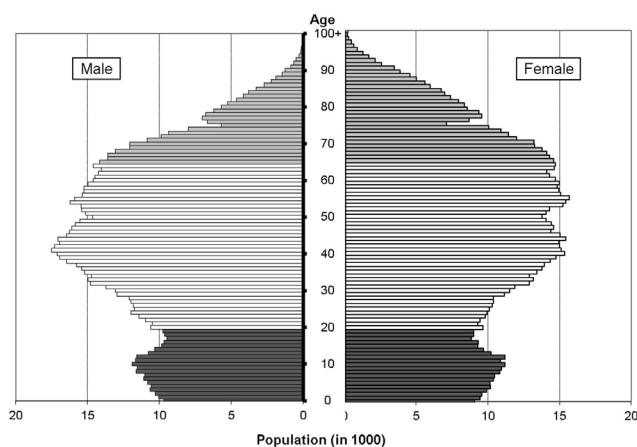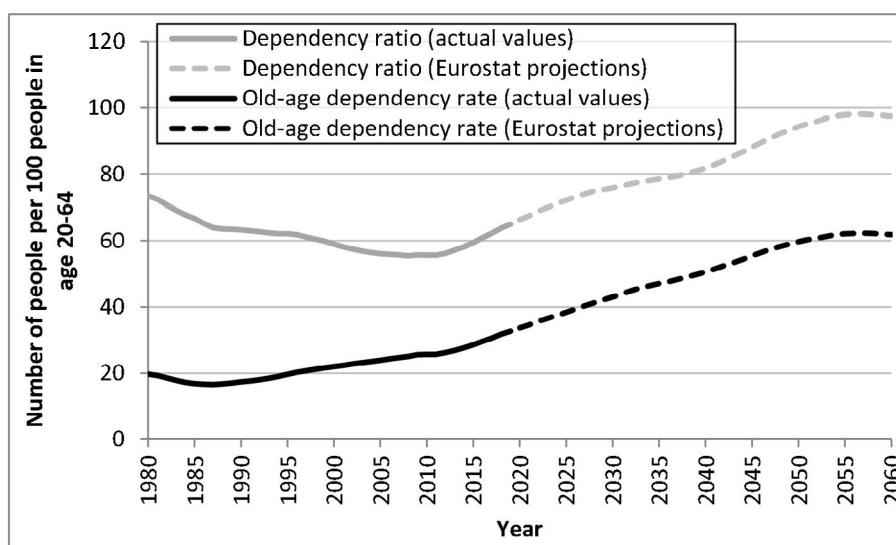


*Source: Statistical office of the Republic of Slovenia, 2022b.*

The existing age structure will lead to strong demographic pressure on the pension system in the future. There are large generations in the age range between 35 and 65 years, which will enter the age group of 65 and older during the next decades. A rapidly increasing life expectancy will further contribute to the growing number of individuals aged 65 and over. On the other hand, there are smaller generations below the age of 30 which will contribute to the declining number of people of working age (aged 20 to 64 years). Also, the number of females of childbearing age will be declining, which will lead to a declining number of births.

The demographic pressure on economic growth and sustainability can be presented with the "dependency ratio" which compares the number of individuals aged 0–19 and 65 and over with the number of individuals of working age (aged 20 to 64 years). For the purposes of analysing the pension system, the indicator "old-age dependency ratio" is even more relevant than the "dependency ratio". The old-age dependency ratio again has the number of individuals aged 20 to 64 years in the denominator, but in the numerator, it only has the elderly aged 65 and over.

*Figure 7: Development of the dependency ratio and old-age dependency ratio between 1980 and 2060 (actual data for 1980 to 2019 and EUROSTAT's population projections for 2020-2060)*



*Source: Statistical office of the Republic of Slovenia, 2022c; EUROSTAT, 2020.*

In 1990, there were 17 people aged 65 and over per 100 people of working age, in 2020 it was already 34 and by 2050 it is projected to be 60 (see old age dependency ratio in Figure 7). As presented above, in these results EUROSTAT assumes net migrations of about 5 thousand per year. The immigrants are assumed to be young individuals, the numbers peaking between 20 to 35 years of age, which in turn means that positive net migrations mitigate the ageing population problem. Without migration, by 2050 the old-age dependency ratio is supposed to increase up to 70.

# 3 PROJECTING EXPENDITURES OF THE FIRST PENSION PILLAR

For the member states, the European Commission regularly monitors the long-term budgetary impact of the ageing population, including the pension system. The latest 2021 Ageing Report (European Commission, 2021), covers the period up to 2070. It builds on the population projections prepared by EUROSTAT in 2020 (EUROSTAT, 2020) and the economic data from 2019, which is the base year for the projections. The projections are prepared for different scenarios.

The latest 2021 Ageing Report (European Commission, 2021), published in May 2021, covers the projection period up to 2070. It builds on the population projections prepared by EUROSTAT in 2020 (EUROSTAT, 2020) and the economic data from 2019, which is the base year for the projections. The calculations apply the harmonized macroeconomic assumptions on productivity growth, employment rates, unemployment rates etc., to make the results comparable across countries. The calculations also draw from the data and expertise of the Statistical office of the Republic of Slovenia, Pension and Disability Insurance Institute of Slovenia (ZPIZ), Institute for Macroeconomic Analysis and Development, various ministries, and some other institutions.

Projections of expenditure on health, long-term care, and the education system are made by the European Commission. However, the projections for pension are provided by the Member States themselves using their national pension models and are subject to a thorough review process within the European Aging Working Group. Given the complexity and specificity of various national pension systems, there is currently no central model available that could provide synchronized pension projections for all countries. Calculations for Slovenia are made with the national models used and developed by the experts from the Institute for Economic Research, at the School of Economics and Business from the University of Ljubljana, the Ministry of Finance (European Commission, 2021a), together with the experts from the Ministry of Labour, Family, Social Affairs and Equal Opportunities. Projections of public pension expenditures on pensions are based on various data sources and simulations of both aggregate and microsimulation pension models. In the calculations, the pension legislation is considered, including measures that have already been adopted but will come into force in the future or are gradually phasing in. However, as a rule, provisions, which are still in the process of planning, coordination, or adoption, cannot be considered in the pension projections.

The focus of the Ageing reports was initially the sustainability of the pension system. Most countries, whose projections show a sharp increase in future pension expenditure, have already introduced measures such as lowering the indexation of pensions to the growth of salaries, raising the retirement age, gradually lowering the level of pensions in the long run etc. In the meantime, the focus has been extended with the concept of »pension adequacy«. Namely, in some countries, the improvements in long-term sustainability have been achieved by legislating gradual reduction in pensions over the long run in the future, which could lead to a rapid increase in poverty among retirees. This can be problematic in two ways. First, as pensions become lower than salaries, there may be growing pressure in the future to halt this decline. Thus, the positive effect of such a measure on the long-term sustainability of the pension system is questionable, even though it

is enshrined in the pension legislation. Second, the excessive lag of pensions in the face of salary growth can lead to an increase in poverty among retirees, who are usually those who are already above average at risk of poverty. The European Commission is now closely monitoring the aspect of long term sustainability but also the pension adequacy to prevent a rapid increase in poverty among pensioners in the future.

The pension projections are presented by several scenarios. The baseline scenario is considered as the most likely scenario. Other scenarios reflect potential risks that could eventually lead to higher pension expenditures than presented in the baseline scenario.

## 3.1   BASELINE SCENARIO

The 2021 Aging Report (European Commission, 2021b) provides projections for the public pension expenditure as % of gross domestic product (GDP). In Figure 8 we present the actual values for 2019 by European countries followed by projections for every five years (2025, 2030, 2035, etc. up to 2070). The values for these years are linked by straight lines, making the years in between only technical interpolations without showing actual projections, since the European Commission has only published the results for every five years.

Figure 8: Projections of public pension expenditures, actual values (in 2019), and projections (for every five years) of public pension expenditures in EU countries
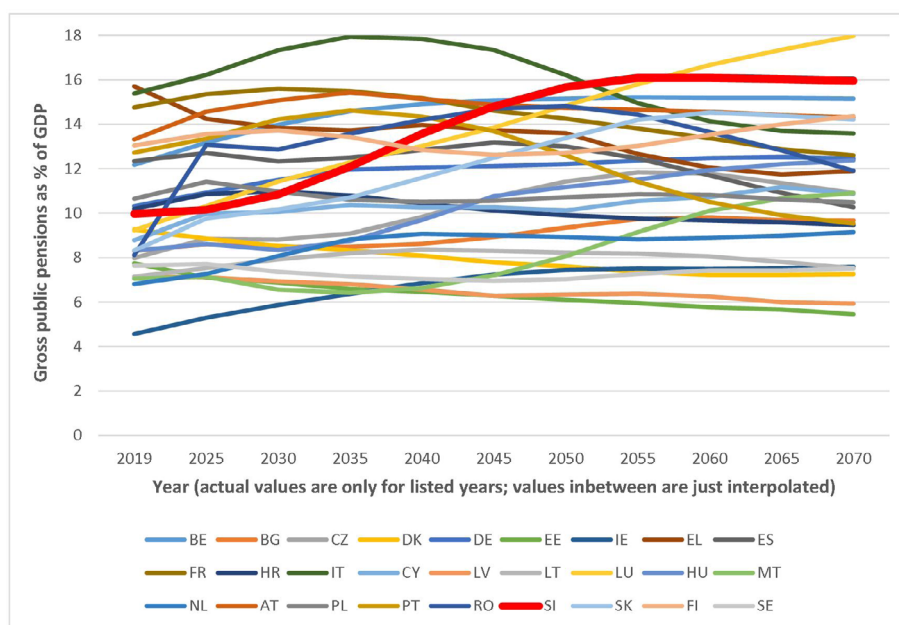


Source: European Commission, 2021a.

As presented in Figure 8, in 2019 Slovenia was somewhere in the middle among the EU countries in terms of public pension expenditure relative to GDP. Under the existing pension legislation, demographic trends and macroeconomic assumptions, the public pension expenditures are projected to increase from 10% of GDP in 2019 to around 16% in 2050 and then stabilizing at that level. By 2070 Slovenia is projected to be the country with the second highest percentage of public pension expenditures relative to GDP. Higher level of public pension expenditure to GDP is projected only for Luxembourg – at around 18% in 2070.

In Table 15 we first show the breakdown of the projected change in the pension expenditure relative to GDP for the period between 2019 and 2070 by individual factors and sub periods. By far, the greatest increase is shown in the demographic changes, reflected in the indicator 'old age dependency ratio'. As already explained, this ratio compares the number of individuals aged 65 and over with the number of working age individuals (people aged 20 64). Due to the sharp increase in old-age dependency ratio, increased pressure will be put on the public pension expenditures in the future – of about 7 percentage points of the GDP between 2019 and 2070. This is one per cent more than the total increase (16%), so all other factors combined will mitigate the growth of pension expenditure relative to GDP by 1 percentage point.

*Table 15: Decomposition of the change in public pension expenditures between 2019 and 2070 (expressed in percentage points of GDP)*

|  | 2019-30 | 2030-40 | 2040-50 | 2050-60 | 2060-70 | 2019-70 |
|---|---|---|---|---|---|---|
| **Public pensions to GDP** | 0.9 | 2.7 | 2.1 | 0.4 | -0.1 | 6.0 |
| **Dependency ratio effect** | 3.0 | 1.9 | 2.4 | 0.5 | -0.8 | 7.0 |
| **Coverage ratio effect** | -1.2 | -0.2 | -0.5 | -0.2 | 0.3 | -1.8 |
| **Benefit ratio effect** | -0.4 | 1.0 | 0.5 | 0.2 | 0.3 | 1.4 |
| **Labour market effect** | -0.3 | 0.0 | -0.2 | 0.0 | 0.1 | -0.4 |
| **Residual** | -0.2 | 0.1 | 0.0 | 0.0 | 0.0 | -0.2 |

*Source: European Commission, 2021a.*

The second component that worsens the long term sustainability of the public pension system is the benefit ratio, i.e., the ratio between average pensions and the average salary. Namely, the pensioners to whom pensions will be granted in the future will face higher accrual rates, which will increase the level of pensions relative to salaries (European Commission, 2021c). The impact will come into force gradually based on the changed pension legislation in 2020. It is also gradually eliminating the »positive discrimination« of women, who in the past received higher accrual rates than men for the same number of working years. The equalisation is being achieved through a higher increase in accrual rates for men compared to women.

According to the pension legislation that was in force in 2019, the total accrual rate for women with 40 years of work would gradually decrease from 63.5% for those retiring in 2019 to 60.25% for those retiring in 2023 and later. However, due to the new pension legislation from 2020, the gradual decrease in accrual rate will not take place. Instead, it will remain at 63.5%, which is an increase of 5.4% for women retiring with 40 years of work in 2023 and later. The increase is significantly

lower for those with fewer years of work – for example, it amounts to merely 1.7% for those with 15 years of work (total accrual rate of 29.5% instead of 29%) On the other hand, for men the total accrual rate is gradually increasing from 57.25% to 63.5% which translates to a 10.9% increase in pensions. For men with fewer years of work, the increase is even higher – up to 13.5% for men with just 15 years of work (29.5% instead of 26%). With the changes in the pension legislation in 2020, the end of the transition period was set to 2025, but with the amendment from 2021, it was shortened to 2023.

After the transition period is over, the accrual rates will be the same for both genders. However, with the pension legislation changes in 2020, an additional accrual rate of 1.36% has been introduced for each child, with a maximum of three children, i.e., 4.08% (1.36*3). The pension legislation says that anyone (woman or a man) who was predominately taking care of a child within the first year of life can opt for this higher accrual rate. However, according to the technical requirements to fulfil this condition, it will be women who will be entitled to these additional accrual rates in the large majority of cases – a man could be entitled only if he would have been on parental leave for at least 120 days. Formally, women can decide whether to take higher pensions based on the number of children or to retire earlier without maluses, but according to the evidence, women opt for the option with higher pensions. Most women retiring in 2021, had on average 1.9 children, which translates to 2.58 (1.36*1.9) percentage points higher total accrual rate, which represents 4.1% higher pensions for those with 40 years of work. The increase is proportionally higher for those with fewer years of work, lowering the total accrual rate. This additional accrual rate will be gradually falling from 2.58 to 2.2 percentage points by 2046, as the average number of children per woman at retirement will gradually decrease from 1.9 children in 2021 to 1.6 in 2046 (EUROSTAT, 2020).

On the other hand, some components improve the long-term sustainability of the public pension system. The greatest mitigating impact on the growth of public pension expenditure has been shown by the reduced coverage ratio, defined as the number of pensioners (of all ages) relative to the population aged 65 and over (European Commission, 2021c). The reduction in this ratio is projected to be the greatest at the beginning of the projection period, mainly due to extending employment. For the 60–64 age group, employment rates are projected to increase from 24% in 2019 to 45% in 2030 (European Commission, 2021a). In the rest of the projection period, the employment rates by age should stabilize, but the coverage ratio is somewhat fluctuating due to the demographic component – i.e., the age distribution of the population.

The second component that improves the projected long term sustainability of the public pension system in Slovenia is the labour market effect, in particular the increasing employment ratio. A slight increase in employment rates is projected for the lower age groups of working age and – as mentioned earlier – in the higher age groups. The labour market effect is expected to reduce public pension expenditure relative to GDP by 0.4 percentage points, whereby most of the effect takes place in the first part of the projection period (2019–2030). These results are derived from the cohort model constructed by the European Commission.

In the long term projections covering the following fifty years strong uncertainties about future developments are evident. The European Commission uses a bundle of sensitivity tests to investigate how sensitive the projections are to demographic assumptions, economic assumptions, and policy scenarios that we will present next, following The 2021 Ageing Report (European Commission, 2021).

### 3.1.1   Sensitivity tests on demographic variables

Within the demographic variables a higher life expectancy, lower migrations and lower fertility are assumed. In particular:

› in the **high life expectancy** scenario, it is tested, how much would the results change if people lived for about 2 years longer than assumed in the baseline scenario. This leads to a higher increase in pension expenditure since people receive pensions longer, which would gradually increase public pension expenditures as % of GDP to 17% – one percentage point more than in the baseline scenario.

› **lower fertility** scenario assumes a fertility trajectory that is 20% below the levels from the baseline scenario. This increases the pension expenditures relative to GDP since there are gradually fewer and fewer people of working age who produce GDP. Until 2030 there is no noticeable negative impact yet because generations of fewer children are not entering employment yet. Thereafter, the negative impact is gradually kicking in, and by the year 2070, the pension expenditure as % of GDP is already 2.1 percentage points higher than in baseline scenario.

› **higher net migration by 33%** has a positive impact on long term sustainability since immigrants are predominantly young, so they contribute to higher GDP which makes pension expenditures relative to GDP lower. The positive impact increases until 2055 when the pension expenditures in GDP are by 0.6 percentage points lower than in the baseline scenario. Thereafter, the difference decreases to 0.4 percentage points by 2070 since individuals who immigrated during the projection period start to retire which increases the pension expenditure.

› at the **lower net migration by 33%** scenario the impact is just reversed compared to the higher net migration by 33% scenario.

*Table 16: Public pension expenditures as % of GDP by scenarios (from initial 10.0% of GDP in 2019) and changes in percentage points in the period between 2019 and 2070*

|  | 2030 | 2040 | 2050 | 2060 | 2070 | Change |
|---|---|---|---|---|---|---|
| Baseline | 10.8 | 13.6 | 15.7 | 16.1 | 16.0 | 6.0 |
| High life expectancy (+2 years) | 10.9 | 13.8 | 16.2 | 16.8 | 17.0 | 7.0 |
| Lower fertility (-20%) | 10.8 | 13.6 | 16.2 | 17.3 | 18.0 | 8.1 |
| Higher migration (+33%) | 10.7 | 13.3 | 15.2 | 15.5 | 15.6 | 5.6 |
| Lower migration (-33%) | 11.0 | 13.9 | 16.2 | 16.7 | 16.4 | 6.5 |
| Higher employment rate of older workers (+10 pps) | 9.8 | 12.0 | 13.8 | 14.5 | 14.5 | 4.6 |
| Higher TFP growth (+0.2 pps) | 10.8 | 13.4 | 15.4 | 15.7 | 15.6 | 5.6 |
| TFP risk scenario (-0.2 pps) | 10.9 | 13.6 | 15.8 | 16.2 | 16.2 | 6.2 |
| Retirement age increases with life expectancy | 10.8 | 13.2 | 14.7 | 14.7 | 14.1 | 4.1 |
| Unchanged retirement age | 11.3 | 14.2 | 16.3 | 16.5 | 16.4 | 6.5 |
| Lagged recovery | 10.9 | 13.6 | 15.7 | 16.1 | 15.9 | 6.0 |
| Adverse structural | 11.2 | 14.2 | 16.5 | 17.0 | 17.0 | 7.0 |
| Fertility to 2.1 children in 2022+ | 10.8 | 13.5 | 15.1 | 14.8 | 13.9 | 3.0 |
| Higher mortality (covid-19) | 10.6 | 13.1 | 15.2 | 15.5 | 15.4 | 4.5 |
| No migration | 11.4 | 14.9 | 18.0 | 18.8 | 18.4 | 7.5 |

*Source: European Commission, 2021.*

## 3.1.2   Sensitivity tests on macroeconomic variables

Concerning the macroeconomic variables, the following scenarios were prepared:

› assuming a **higher employment rate of workers aged 55 to 74** years by 10 percentage points. This impact has a twofold positive impact on the long term sustainability of the public pension system compared to the baseline scenario. First, the GDP will be higher since more individuals will work. Second, there will be fewer retirees because people will retire later lowering pension expenditures as compared to the baseline scenario. This has a substantial and immediate positive effect, since

› with a **higher annual growth rate of total factor productivity (TFP)** being 0.2 percentage points higher in each year of the projections compared to the baseline scenario, the results are more favourable. However, by 2070 the pension expenditures relative to GDP are only lower by 0.4 percentage points since the real growth of pensions is in the 60% indexed to the real growth of salaries. By assumption, the growth of salaries equals productivity growth and in 60% of that growth, the pensions also increase. Therefore, the positive impact of productivity on pension sustainability is limited by high indexation. Also, the positive impact kicks in gradually since a higher GDP builds gradually over time compared to the baseline scenario.

### 3.1.3    Sensitivity test on policy-change scenarios

Finally, there is sensitivity to policy changes in terms of changes that would be introduced into the pension system. The impact of the following scenarios has been tested on the pension expenditures:

› **retirement age increases in line with life expectancy**. In the baseline scenario the European commission simulates the increase in retirement age only in the first decade of the projection period. In the remaining four decades there a substantial increase in life expectancy is projected, but no increase in employment rates at higher ages. By linking retirement age to the increasing life expectancy, the growth in pension expenditures would increase to 14.1% in 2070 instead of 16%, thus the increase would be mitigated by 1.9 percentage points. Additionally, this measure is also a recommendation of the OECD for Slovenia for coping with the increasing pension expenditures in the future (OECD, 2022).

› **unchanged retirement age** would deteriorate long term sustainability of the Slovenian pension system since there would be no increase in the retirement age that for the first decade of the projection period in the baseline scenario. Pension expenditures as % of GDP would be around 0.5 percentage points higher than in the baseline scenario and this difference would persist throughout the rest of the projection period.

› finally, there were two scenarios prepared related to covid 19 risks. First, the **lagged recovery** scenario assumes a more pronounced cyclical downturn and a longer recovery phase. In 2025, this would cause 0.4 percentage points higher pension expenditure than in the baseline scenario. Due to lower employment rates, the GDP would be lower and, therefore, pension expenditures relative to GDP would be larger than in the baseline scenario. However, by 2030 the difference would be only 0.1 percentage points, whereas in 2035 and later, there would be no difference compared to the baseline scenario since by 2027 most of the recovery would have already taken place and by 2036 full recovery is assumed. Second, **adverse structural** scenario assumes lower growth potential over the first decade of projections and consequently making the GDP permanently lower. This permanent impact of covid 19 would have had a severe impact on long term sustainability of the Slovenian public pension system, gradually increasing to 1 percentage point in 2070.

## 3.2    OUR SCENARIOS

Pronounced population ageing Slovenia will face in the future decades is largely due to the very low fertility of 1.6 or less during the last three and a half decades. Often it is the understanding that reverting to the replacement level of 2.1 children for developed countries (2.07 for the most developed countries) would solve the demographic pressure on the long-term sustainability of the public system. Therefore, we present the results under the highly unlikely scenario if **total fertility rate would immediately (in 2022) increase to 2.1 children** per woman, and it would remain at this level during the entire projection period. In Table 16 we see that this would indeed reduce pension expenditure relative to GDP by 3 percentage points in 2070, but it is still far from

preventing population ageing entirely. Also, there would be almost no positive impact in the first two decades of population projections (new-borns would not enter the employment yet) and only mild impact by 2050 – thus, in the three decades when the population ageing will be the strongest.

Next, during the covid 19 pandemic the mortality went up considerably – life expectancy has increased by about 1 year. There is no impact of covid 19 in the baseline scenario since population projections were prepared in 2019. We hope that the excess mortality due to the covid 19 will soon fade out and we will return to the lower mortality trajectories from pre covid 19 times. Still, as an exercise we provide a **higher mortality (covid 19) scenario** for the case if mortality increase would be permanent in the magnitude recorded in Slovenia for 2020 when life expectancy at birth was about 1 year lower compared to a situation where there would be no covid 19. This lowers the pension expenditures in the projections by around 0.5 percentage points of GDP during most of the projection period.

Finally, we add one more scenario on migration. In figure 3 we presented the development of net migration in Slovenia in the past. However, the high average values which were the basis for future assumptions set by the EUROSTAT, originate predominantly from very high migrations recorded between 2007 and 2009 and recently. However, without those two periods the average for the period since Slovenian independency (1991 and later) is just 1.663 per year. Therefore, we added a **scenario with no migration** in which the long term sustainability of the public pension system would be strongly challenged since expenditures would reach 18.8% of GDP in 2060. Thus, positive net migrations are very important for Slovenia to mitigate the pressure of population ageing on the sustainability of the pension system.

# 4    THE FIRST PENSION PILLAR – SUMMARY

Slovenia is witnessing intense population ageing with rapidly increasing ratio between people aged 65 and over and the working age population aged 20 to 64. Population ageing in the future will be driven several factors, but mostly by low fertility rates of about 1.6 and less from the last three and half decades, rapidly increasing longevity, and the very unfavourable age structure of the population whereby numerous generations will enter retirement age and small generations of young people will enter working age and fertility age. This will pose a great challenge to the Slovenian pension system which is based on the pay-as-you-go financing principle.

According to the latest projections published by the European Commission in 2021, public pension expenditures are projected to increase from 10% of GDP in 2019 to 16% in 2070, to a staggering 15.7% by 2050. The growth of pension expenditure is projected to be mitigated by the increase in employment rates, especially in the higher age groups just before retirement. However, this positive impact will be largely neutralized by the increase in accrual rates for calculating pensions that have been introduced in 2020. This measure will increase the pensions of new pensioners by about 10%, but it will also put significant additional strain on the long-term sustainability of the public pension system.

Numerous additional scenarios have been provided by the European commission to test the sensitivity of the results to different demographic assumptions, macroeconomic assumptions, and various policy changes. We have calculated three additional demographic scenarios to shed further light on the extent fertility, mortality, and migration have on projections of pension expenditures. The largest threat turns out to be the absence of positive net migrations Slovenia was facing in the past and are also assumed for the future. On the other hand, the greatest positive impact on long-term sustainability of the pension system show to be the increasing employment rates at higher ages (60 and over) or linking the increase in retirement age to the increase in longevity. Also, fertility has a large impact on the results, since 20% lower fertility is close to being the most unfavourable result whereas immediate increase to the replacement level of 2.1 children per woman proves to be the most favourable results. The impact of fertility is very gradual with no positive impact in the first two decades, but becomes very important long-term.

The 2012 pension reform (ZPIZ-2) and its subsequent amendments introduced several changes that had positive or negative effects on the adequacy of new and future pensions. Additionally, during the last several years, the financial consolidation measures adopted with the intent to achieve budgetary consolidation have had an important negative impact on current pensions and the minimum income provision for older people. The relative income indicators as well as indicators of the risk of poverty and material deprivation show a positive movement towards pension adequacy, especially for women. It can be concluded that the joint effects of ZPIZ-2 reform, its subsequent revisions, and the financial consolidation measures have had an overall positive effect. On the other hand, estimates revealed that, while the reform ensured sustainability in the medium term, major challenges to long-term sustainability remain.

Short-term policy recommendations regarding the maintenance and improvement of adequacy of pensions as well as the long-term sustainability of the pension system are stated below. Slovenian Government must start an open and continuous public debate on the adequacy of pensions with all relevant stakeholders and based on the conducted analyses. A thorough analysis of the effects of changes in the social assistance benefits (replacement of the state pension by permanent cash social assistance, and the change of minimum pension support into income supplement) is urgently needed so that the government will be able to design measures aimed at providing appropriate support to low-income pensioners.

The expected progress in addressing the recommendations on strengthening the long-term sustainability and adequacy of the pension system should go beyond financial sustainability. Namely, the data on the years of work reveal substantially lower values for younger generations compared to the older ones. The reasons can be found in higher shares of younger generations in the educational process, lower density of work and the government measures related to the labour market. Young generations will thus have a lower number of working years at their retirement age and consequently lower pensions. Additionally, low insurance base and different density of work for the self-employed and persons in non-standard forms of work reveal a serious problem of inadequacy for their future pensions. In-depth analyses are urgently needed (evaluation of the number of persons in precarious forms of work, the impact of labour costs on the demand and offer of these forms of work, estimation of the adequacy of their pensions, etc.).

Based on the in-depth analysis and permanent dialogue with stakeholders, the Slovenian government will have to search for equilibrium between pension adequacy and long-term sustainability of the system. A balance should also be found between the importance of certain pension pillars, making coordinated actions in many areas, such as education, healthcare, long-term care, and the labour market in order to effectively implement agreed changes in practice with the final aim of a financially sustainable system that enables adequate pensions to all pensioners.

# 5 THE SECOND PENSION PILLAR

The second pension pillar covers **voluntary** (for all employees) and **mandatory** (for public employees and for workers in arduous and hazardous jobs) additional pension insurance.

**Voluntary supplementary pension insurance** (hereafter VSPI) is the basic form of saving for old age in Slovenia through the collection of funds in the personal accounts of insured persons supported by tax reliefs. Premiums paid by the employer are not subject to corporate income tax and employer social security contributions, while premiums paid by the employee are not subject to personal income tax. In both cases, the amount of the relief is limited to 5.844% of the individual's annual gross salary or to the amount of EUR 2,903 (in 2022).

**Voluntary supplementary pension insurance** is further divided into **collective** and **individual voluntary supplementary pension insurance**.

**Collective voluntary supplementary pension insurance** is a type of insurance in which individuals are included through their employer, who partially or fully finances the pension plan against their own funds. Insured persons who are engaged in independent activity (the self-employed) can also be included in this form. **Individual voluntary supplementary pension insurance** is an insurance that can be taken out independently by any individual who finances the premium payments entirely with their own funds.

The VSPI is based on an approved pension plan, which determines the conditions for obtaining rights from additional insurance, the type and scope of these rights and the procedure for their enforcement. Funds from VSPI are collected and managed in pension funds formed in accordance with ZPIZ-2. A pension fund can be formed as:

a) a mutual pension fund (vzajemni pokojninski sklad),

b) an umbrella pension fund or (krovni pokojninski sklad)

c) a cover fund (kritni sklad)

It can be created and managed by:

a) pension companies regulated under ZPIZ-2 (pokojninske družbe),

b) insurance companies licensed to carry out business in the insurance group of life insurance in accordance with the law governing the insurance industry (zavarovalnice), and

c) banks licensed to carry out pension fund management operations according to the law governing banking (banke) (MDDSZ, 2019b).

On the other hand, the mandatory pension insurance is organized inside two institutions:

1. **Mandatory occupational pension scheme for public employees** which is carried out within the framework of the Closed Mutual Pension Fund for Public Employees (Krovni pokojninski sklad javnih uslužbencev KPSJU) managed by Modra zavarovalnica, d.d. It was introduced on August 1st 2003 and covers all public employees providing additional annuities (pensions) from the second pillar in addition to those that belong to the individual from the first pillar, i.e., pension paid by ZPIZ.

2. **Mandatory occupational pension scheme for workers in arduous and hazardous jobs** which is carried out within the framework of the Compulsory Supplementary Pension Insurance Fund (Sklad obveznega dodatnega pokojninskega zavarovanja SODPZ), a mutual pension fund, managed by Kapitalska družba pokojninskega in invalidskega zavarovanja, d.d.

Table 17 presents the basic data of the second pillar for voluntary pension insurance and part of the mandatory insurance – pertaining public employees (data for occupational pension scheme for workers in arduous and hazardous jobs is not included). Data shows that at the end of 2022, almost 310,000 people were included in the voluntary supplementary pension insurance and the overall amount of collected funds was EUR 2,988 million, while the average premium of active additional policyholders in 2021 was below EUR 100.

*Table 17: Number of insured persons included in the second pillar*

| Date | Mutual and umbrella pension funds | Pensions companies | Insurance companies | Total |
|---|---|---|---|---|
| 31. 12. 2022 | 309,709 | 242,867 | 46,036 | 598,612 |
| 31. 12. 2021 | 300,528 | 238,646 | 45,980 | 585,154 |
| 31. 12. 2020 | 293,948 | 147,630 | 132,641 | 574,219 |
| 31. 12. 2019 | 287,825 | 143,501 | 129,396 | 560,722 |
| 31. 12. 2018 | 282,620 | 140,311 | 125,258 | 548,189 |
| 31. 12. 2017 | 272,957 | 134,653 | 124,461 | 532,071 |
| 31. 12. 2016 | 266,300 | 131,032 | 120,532 | 517,864 |
| 31. 12. 2015 | 259,606 | 127,640 | 111,244 | 498,490 |
| 31. 12. 2014 | 249,066 | 129,724 | 111,073 | 489,881 |
| 31. 12. 2013 | 249,153 | 132,120 | 112,724 | 495,894 |
| 31. 12. 2012 | 251,712 | 138,953 | 117,349 | 508,014 |
| 31. 12. 2011 | 257,700 | 153,435 | 126,626 | 537,761 |
| 31. 12. 2010 | 254,068 | 159,199 | 128,197 | 541,464 |
| 31. 12. 2009 | 247,482 | 154,976 | 126,817 | 529,275 |
| 31. 12. 2008 | 239,433 | 150,251 | 125,448 | 515,132 |
| 31. 12. 2007 | 231,396 | 142,658 | 117,012 | 491,066 |
| 30. 11. 2006 | 219,292 | 232,466 | / | 451,758 |
| 30. 06. 2004 | 195,138 | 143,443 | 38,349 | 376,930 |

| 31. 12. 2003 | 36,573 | 130,702 | 43,188 | 210,463 |
| 31. 12. 2002 | 31,539 | 103,760 | 37,745 | 173,044 |

Data refers to the voluntary supplementary pension insurance and part of mandatory supplementary pension insurance – pertaining public employees (data for occupational pension scheme for workers in arduous and hazardous jobs is not included).

*Source: Government of the Republic of Slovenia, 2023.*

*Table 18: The amount of funds collected in December 2022:*

| Funds collected | (Stated in EUR 1,000): |
| --- | --- |
| Insurance companies | 269,810 |
| Pensions companies | 1,271,556 |
| Mutual and umbrella pension funds | 1,447,094 |
| Total | 2,988,460 |

Data refers to the voluntary supplementary pension insurance and part of mandatory supplementary pension insurance – pertaining public employees (data for occupational pension scheme for workers in arduous and hazardous jobs is not included).

*Source: Government of the Republic of Slovenia, 2023.*

*Table 19: The average monthly premium of active voluntary supplementary pension insurance policyholders in 2021*

| Average premium | (Stated in EUR) |
| --- | --- |
| Insurance companies | 91.09 |
| Pensions companies | 75.96 |
| Mutual and umbrella pension funds | 46.72 |

Data refers to the voluntary supplementary pension insurance.

*Source: Government of the Republic of Slovenia, 2023.*

The relatively low average amount of assets saved in VSPI suggests that existing sizes of premiums are too low for a significant size of pension annuity from the second pillar after retirement. However, we must be aware that we are dealing with individuals of different ages as well as different lengths of working life and consequently different payment histories.

## 5.1   THE SECOND PENSION PILLAR – VOLUNTARY SUPPLEMENTARY PENSION INSURANCE[7]

Results presented in this chapter are based on data of major voluntary pension insurance providers in Slovenia (providers representing 2.4% of all number of policies were not included). Considering the overall number of employees, a reduction in the number of policies by those that belonged to the same insured person within the framework of an individual pension fund, the VSPI system is the grouped as:

1. **Active policies**, for which premiums were paid in 2017 (174 thousand):

    a) Collective policies – premiums are paid only by the employer (124 thousand):

    b) Collective policies – premiums are paid by the employer and the employee (32 thousand)

    c) Individual policies – premiums are paid only by the employees (18 thousand).

2. **Non-active policies**, for which no premiums were paid in 2017 (107 thousand)

The difference between the employed included in voluntary pension insurance and the overall number of employees is the employees who are not covered by VSPI.

The following figure shows data about the voluntary pension insurance system in 2017 by gender and one-year age cohorts.
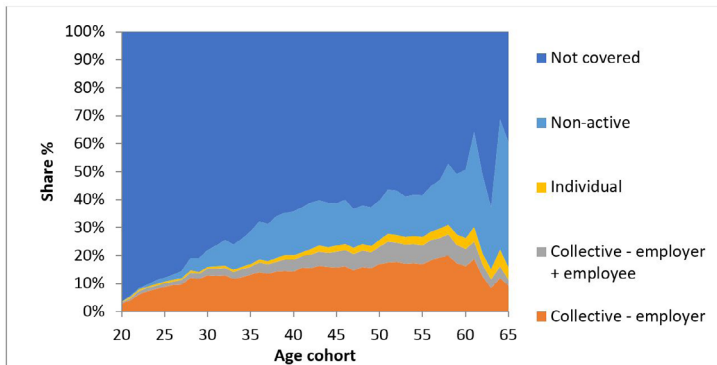
*Figure 9: Number of the employed – members of the VSPI in 2017 (men)*
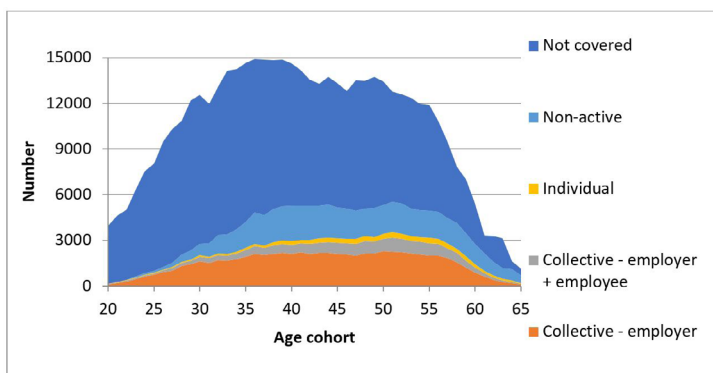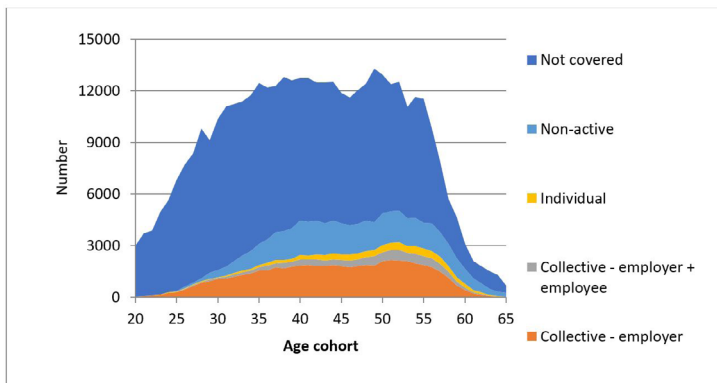


*Source: Majcen et al., 2020.*

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7   This chapter is based on Majcen et al., 2020.

*Figure 10: Share of the employed – members of the VSPI in 2017 (men)*
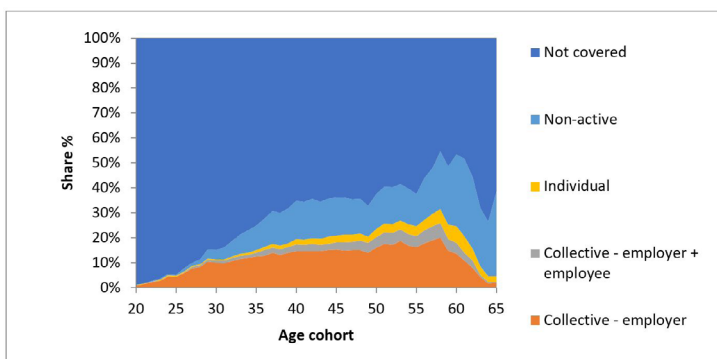


*Source: Majcen et al., 2020.*

*Figure 11: Number of the employed – members of the VSPI in 2017 (women)*



*Source: Majcen et al., 2020.*

*Figure 12: Share of the employed – members of the VSPI in 2017 (women)*



*Source: Majcen et al., 2020.*

The basic findings regarding the current state of active policies are:

› The average share of active collective policies in the total number of employees, for which premiums are paid only by employers, reaches 14.3% for men and 13.1% for women.

› The average share of active collective policies in the total number of employees, for which the employer and the employee pay the premium, reaches 4.3% for men and 2.6% for women.

› The average share of active individual policies in the total number of employees reaches 1.8% for men and 2.2% for women.

› The average share of non-active policies in the total number of employees reaches 13.3% for men and 11.9% for women.

› The average share of all active voluntary insurance policies thus only slightly exceeded 20% of all employees among men (20.4%) but did not reach this value among women (17.9%).

## 5.1.1   Projected expenditures of the voluntary supplementary pension insurance

This chapter includes the results of calculations in which, for the current active population, we estimate the size of the expected pension from the existing first pillar, the size of the annuity from the second pillar, assuming the current volume of payments into the second pillar, and the net replacement rate (ratio between the first pension received and the last net salary expressed in %). We performed separate calculations specifically for voluntary collective additional insurance (group of premiums for which only the employers pay and the group for which both employers and employees pay), and for both groups within the closed mutual pension fund for public employees.

Calculations are performed by the specially developed cohort model for the first and second pillar. The base year for the calculations is 2017 and projections cover the period between 2017 and 2070. They are based on the assumptions of 2.0 real annual rate of return.

Results are expressed as average values for one-year age cohorts of both genders, for the following groups of voluntary pension insurance members:

**Group A: where the premiums are paid only by the employer:**

Figure 13 presents the relative size of the annuity from the second pillar for those employees where premiums are paid only by the employers. For those who are 20 years old, the annuity from the second pillar on average will represent around 16% of the pension from the first pillar.

*Figure 13: Share of the annuity from the second pillar in the pension from the first pillar, by age cohort – premium is paid only by the employer (%)*
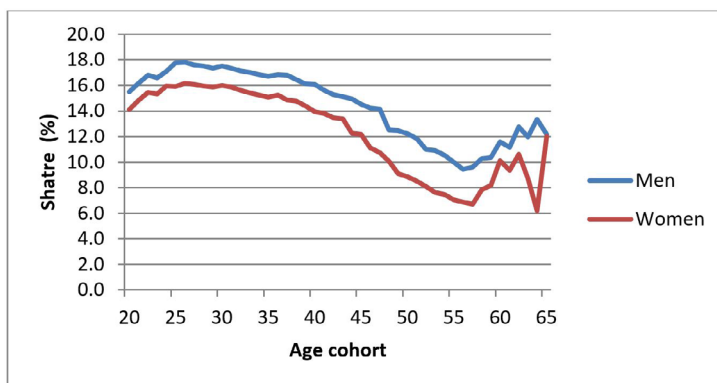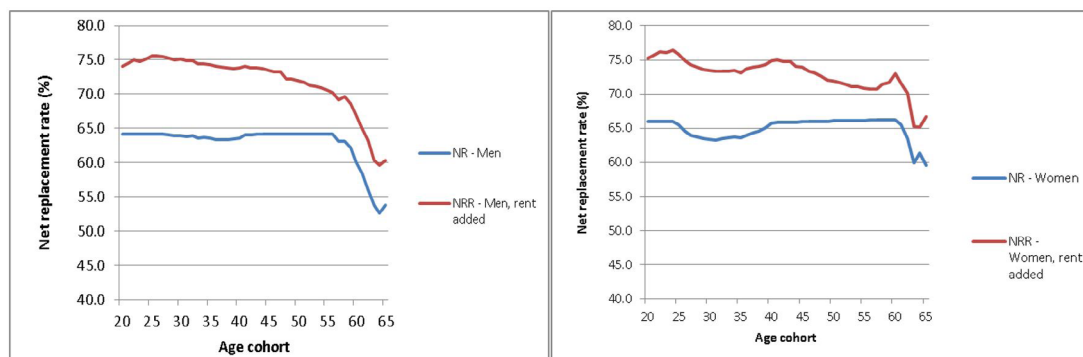


*Source: Majcen et al., 2020.*

We can conclude that for cases, in which companies pay premiums for the entire period of employment, employees can expect a pension upon retirement, which will increase their pensions from the first pillar by 18% (about two percentage points less for women). From the point of view of the second pillar as a whole, the main problem is twofold: first, the amount of premiums paid (for men, it is on average around 4% of the gross salary and decreases in the higher age cohorts, the situation is somewhat worse for women, where the amount of premiums in the higher age cohorts is lower than for men), and second, the short period of payment of premiums made and the insufficient share of insured persons in the total number of employees.

In the following, we will look at the estimates of the movement of the net replacement rate – that is, the ratio between the amount of the average first old-age pension from the first pillar and the last net salary, taking into account only the old-age pension (NR) and the old-age pension and annuity (NNR), which was received by the insured persons of the second pillar.

*Figure 14: Net replacement rate – premium is paid only by the employer*



*Source: Majcen et al., 2020.*

The rapid increase in the net replacement rate with the reduction of the age of insured persons (men), considering only the old-age pension (NR), is the result of the increase in the retirement age achieved when the retirement conditions are met, as well as the gradual increase in the percentages for men from 57.25% to 63.5%. The increase is expected to be faster for women, who maintain the same percentages for 40 years of work in the amount of 63.5%, reached in 2019. With the assumptions considered, the NR for younger age cohorts reaches 64.2% and 65.9% of the last average net salary for men and women, respectively. The impact of the economic crisis on the lower achieved NR is particularly pronounced for women in the 25–40 age cohorts and is a result of unemployment and, therefore, lower retirement age when retirement conditions are met. For men, this impact is significantly smaller and less noticeable in the age cohorts of 34–40 years.

If the estimated annuity is added to the pension, the net replacement rate (NRR) rises accordingly and exceeds the value of 75% in the younger male age cohorts. The movement of the NRR according to the age cohort for women shows large fluctuations around the three peaks, which reach values of 75% for the youngest age cohorts and the 41–44 age cohorts. The first decrease in the value of the NRR for the age cohorts 60–50 years is the result of the reduction of the attained retirement age, which, for these age cohorts, gradually falls from 65 to 61 years, the increase in life expectancy, and the reduction of annuities. The second decrease in the value of the NRR is the result of a decrease in the retirement age due to unemployment during the last economic crisis and, as a result, a lower old-age pension.

Pensions for men, thus, depending on individual age cohorts, contribute to the net replacement rate (NRR) by 6.4–11.4 and 3.8–10.5 percentage points for women. Of course, we must be aware that the NRR will increase only for those individuals for whom employers pay premiums within the VSPI and that, currently, there are very few younger insured persons among them. The increase in the net replacement rate will therefore be much lower on average for the entire population of employees.
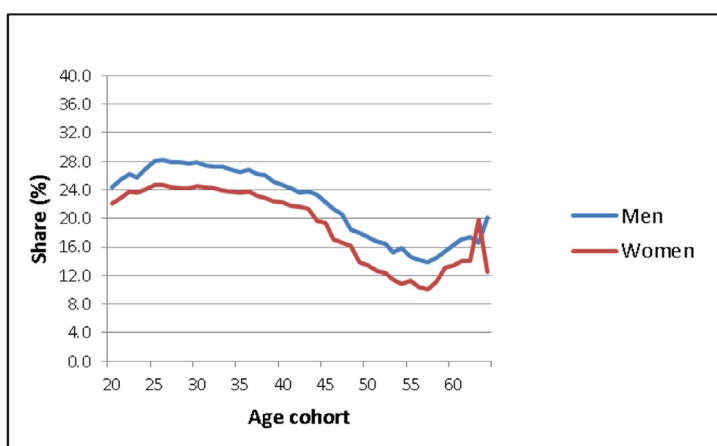
## Group B: where the premiums are paid by the employer and employee

The number of active policies in this group is much lower compared to the number of policies where only the employer pays the premiums (14.3% and 13.1%), as their number reaches only 4.3% and 2.6% (for men and women) in the total number of employees. The share is very low at the beginning of the active period and gradually increases, reaching a maximum value of 7% of all employees for men and 5.7% for women. Due to higher average payments by employers and additional payments made by employees compared to the first group (EUR 6,680 for men and EUR 4,731 for women), the average funds collected are more than EUR 3,000 higher with smaller differences between men and women. In this case, the employees contribute about a quarter of all funds collected – the total amount of paid premiums thus exceeds the paid premiums in the first group by more than 60%.

Considering the same assumptions regarding the achieved average retirement age of each age cohort and their average gross salary, the movement of the share of the annuity in the pension is very similar to that of the first group of insured persons. At the same time, the importance of the annuity is expectedly higher and reaches 28% and 24.7% (for men and women, respectively) in the younger cohorts.

The higher share of annuities in the pension compared to the first group should also be reflected in a higher net replacement rate (Figure 14). The movement of the net replacement rate according to the age cohort, taking into account only the old-age pension (NR), is the same as for the first group of insured persons. However, we can detect a higher NR, which is the result of lower net salaries due to the payments of premiums by individuals. With the assumptions considered, the NR for younger age cohorts reaches values of 65.9% for men and 68.3% for women. If the estimated annuity is added to the pension, the net replacement rate (NRR) rises accordingly and reaches values of 84% for both genders in the younger age cohorts. Here, it is necessary to draw attention to the typical movement of the NRR for women, which reflects the consequences of the lower retirement age of the female cohorts of 25–40 years when the retirement conditions are met.

*Figure 15: Share of the annuity from the second pillar in the pension from the first pillar, by age group – premiums are paid by the employer and employee (%)*



*Source: Majcen et al., 2020.*

Figure 16: Net replacement rate – collective VSPI – premiums are paid by the employer and employee
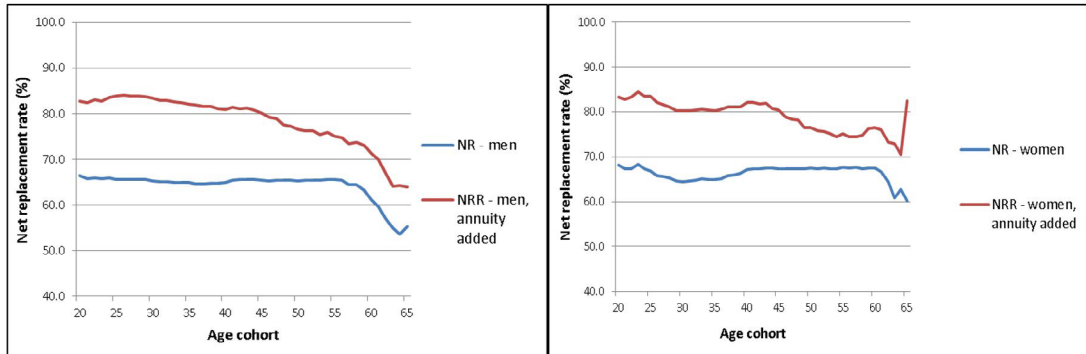


Source: Majcen et al., 2020.

For men, the added annuities thus contribute to the net replacement rate (NR) by 8.7–18.5 and 6.8–16.2 percentage points for women, depending on the individual age cohorts. Of course, we must be aware that this group of insured persons is relatively small, as it covers only a few per cent of all employees in Slovenia. However, the calculations also reveal the fact that voluntary additional pension insurance, in which premiums are paid by both employers and employees, can significantly contribute to increasing pensions from the first pillar.

## 5.2 THE SECOND PENSION PILLAR – THE COMPULSORY OCCUPATIONAL PENSION SCHEME FOR PUBLIC EMPLOYEES[8]

The Compulsory occupational pension scheme for public employees is carried out within the framework of the Closed Mutual Pension Fund for Public Employees (Krovni pokojninski sklad javnih uslužbencev – hereafter KPSJU) managed by Modra zavarovalnica, d.d. It was introduced on August 1st 2003, and covers all public employees providing additional pensions from the second pillar in addition to those that belong to the individual from the first pillar, i.e. pension paid by ZPIZ.

The closed mutual pension fund for public employees is financed by mandatory premiums paid to the their pension account by their employer. Those premiums are not subject to employees' personal income tax. In addition, voluntary individual premiums can also be paid into the same pension account, by employees themselves, according to the general rules that apply to the second pillar. In this case, those payments represent tax reliefs.

The fund was established in 2003 when the amount of the individual premium was based on the individual's total retirement age at the time, disregarding whether they had achieved it in the public or private sector. Individuals were classified into 36 premium classes, and their premiums were set in a range from EUR 16.86 in the first premium class (for individuals with less than one

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8   This chapter is based on Majcen et al. 2020.

year of pensionable age) to EUR 42.22 in the last premium class (for individuals with more than 35 years of pensionable age). Since August 1st 2003, every individual employed in the public sector is automatically assigned to the first premium class, regardless of their total pension period. Even an individual who leaves the public sector and returns to it is assigned to the first premium class upon return and not to the one they had upon leaving the public sector. The result of such an arrangement was that most individuals were classified in the first premium class by the end of 2017.

The following part incudes results of the analysis provided by Majcen et al. (2020) which covers the fund in 2017.

Table 20: Closed mutual pension fund for public employees: number and share of members, by gender and premium class at the end of 2017 – all members
Source: Majcen et al., 2020.

| Premium class | Number | | Share (%) | |
|---|---|---|---|---|
| | Men | Women | Men | Women |
| 1 | 36,229 | 89,375 | 55.6 | 57.0 |
| 2 | 1,018 | 1,929 | 1.6 | 1.2 |
| 3 | 1,082 | 2,068 | 1.7 | 1.3 |
| 4 | 1,051 | 2,151 | 1.6 | 1.4 |
| 5 | 1,109 | 2,219 | 1.7 | 1.4 |
| 6 | 981 | 2,188 | 1.5 | 1.4 |
| 7 | 1,033 | 2,399 | 1.6 | 1.5 |
| 8 | 1,127 | 2,404 | 1.7 | 1.5 |
| 9 | 1,162 | 2,563 | 1.8 | 1.6 |
| 10 | 1,185 | 2,628 | 1.8 | 1.7 |
| 11 | 1,194 | 2,640 | 1.8 | 1.7 |
| 12 | 1,366 | 2,541 | 2.1 | 1.6 |
| 13 | 1,403 | 2,306 | 2.2 | 1.5 |
| 14 | 1,156 | 2,378 | 1.8 | 1.5 |
| 15 | 1,220 | 2,469 | 1.9 | 1.6 |
| 16 | 1,218 | 2,671 | 1.9 | 1.7 |
| 17 | 1,278 | 2,747 | 2.0 | 1.8 |
| 18 | 1,363 | 3,247 | 2.1 | 2.1 |
| 19 | 1,331 | 3,513 | 2.0 | 2.2 |
| 20 | 1,251 | 3,574 | 1.9 | 2.3 |
| 21 | 1,193 | 3,474 | 1.8 | 2.2 |
| 22 | 1,137 | 3,421 | 1.7 | 2.2 |
| 23 | 925 | 2,968 | 1.4 | 1.9 |
| 24 | 858 | 2,972 | 1.3 | 1.9 |
| 25 | 748 | 2,626 | 1.1 | 1.7 |
| 26 | 537 | 1,635 | 0.8 | 1.0 |

| | | | | |
|---|---|---|---|---|
| 27 | 292 | 670 | 0.4 | 0.4 |
| 28 | 148 | 262 | 0.2 | 0.2 |
| 29 | 118 | 165 | 0.2 | 0.1 |
| 30 | 79 | 100 | 0.1 | 0.1 |
| 31 | 65 | 98 | 0.1 | 0.1 |
| 32 | 63 | 75 | 0.1 | 0.0 |
| 33 | 50 | 56 | 0.1 | 0.0 |
| 34 | 42 | 58 | 0.1 | 0.0 |
| 35 | 38 | 53 | 0.1 | 0.0 |
| 36 | 155 | 64 | 0.2 | 0.0 |
| **Total (221,912)** | **65,205** | **156,707** | **100.0** | **100.0** |

The total number of members (221,912) includes:

a) Individuals who are no longer employed in the public sector but still have an open pension account in the fund. Their insurance policies are not active.

b) Individuals who were employed in the public sector at the end of 2017 and had an active policy but were less than 100% employed in the public sector and, therefore, had lower amounts in their pension accounts within the fund

c) Individuals who were 100% employed in the public sector at the end of 2017 and had an active policy (their number is 173,045).

For the purposes of this analysis, only individuals under point c) were included, i.e., those who were 100% employed in the public sector at the end of 2017 and had an active policy. They are separated into two groups:

**Group 1**: includes 87,624 participants who have been members of the fund since the beginning of insurance (from August 1st 2003) and had an active policy at the end of 2017. Because they became members of the fund at the time of establishment, they were distributed among 36 premium classes, depending on their retirement age on August 1st 2003. Individuals with less than one year of pensionable age were allocated to the first premium class, while individuals with more than 35 years of pensionable age were allocated to the 36th premium class.

**Group 2**: includes 85,421 participants who were employed in the public sector after August 1st 2003 (or left the public sector and returned to it after that date) and had an active policy at the end of 2017. They were all allocated to the first premium class.

The following part includes projections of the pensions from the second pillar. Results are expressed as average values for both genders, for the two groups of public employees based on their classification into premium classes: Group 1 and Group 2. It is assumed that employees will remain employed in the public sector until their retirement.

Figure 40 presents the relative size of the annuity from the second pillar in the old age pension received from the first pillar for Group 1, which includes individuals who have been members since the establishment of the fund (August 1st 2003) and have an active policy at the end of 2017. Since they became members of the fund at the time of its foundation, they were distributed among 36 premium classes according to their retirement age on August 1st 2003. Calculations were made for all salary classes of civil servants – in order to preserve clarity, the presentation is limited to only four salary classes.

*Figure 17: Group 1 – Share of the annuity from the second pillar in the pension from the first pillar by premium class and selected salary class (men) (in %)*
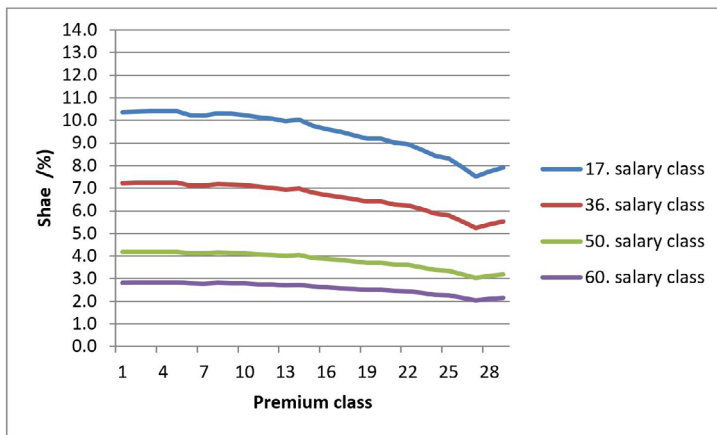


*Source: Majcen et al., 2020.*

*Figure 18: Group 1 – Share of the annuity from the second pillar in the pension from the first pillar by premium class and selected salary class (women) (in %)*
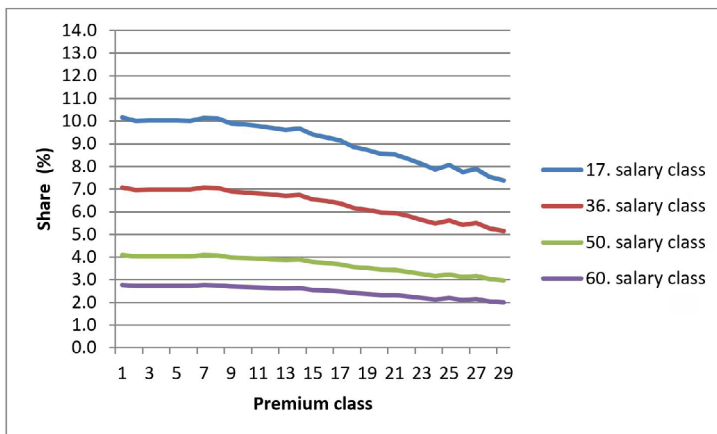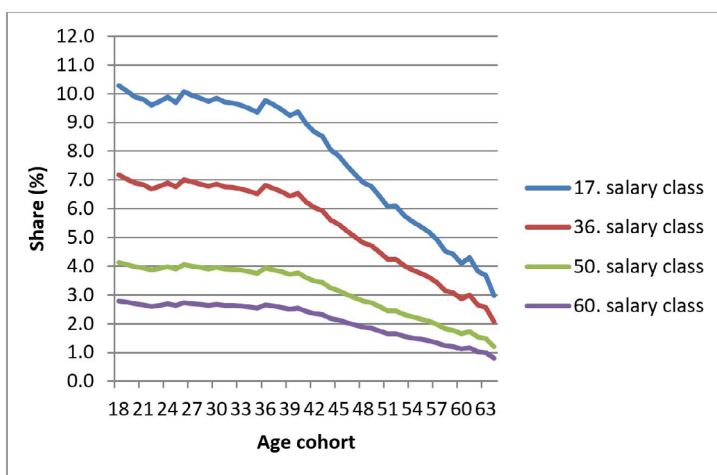


*Source: Majcen et al., 2020*

Since the annuities within the premium class are the same for all individuals and are independent of their salaries, the share of the annuity from the second pillar in the pension from the first pillar is different, as it depends on the amount of the pension from the first pillar.

For individuals from lower salary classes, who will receive lower pensions, pension annuities will represent a larger share. For example, for a man from the first premium class and the 17th salary class, the annuity represents 10.4% of the pension from the first pillar, while in the 60th salary class it only reaches 2.8%.

At the same time, the results also point to the fact that the higher premium in higher premium classes, which is intended for older employees, does not fully compensate for the lesser amount of collected funds due to the shorter premium payment periods. The results indicate that within each salary class, the share of the annuity from the second pillar decreases despite the higher premium (higher premium class).

Figures 43 and 44 present the relative size of pensions from the second pillar for Group 2, which includes individuals who were employed in the public sector after August 1st 2003 (or left the public sector and returned to it at a later date) and had an active policy at the end of 2017. Since all individuals from Group 2 were classified in the first premium class, the amount of the premium is the same for everyone, and the amount of funds depends on how long they have been employed in the public sector. For younger employees, who will have accumulated a higher amount of savings by retirement, the expected pension from the second pillar is, therefore, higher for both genders.

*Figure 19: Group 2 – Share of the annuity from the second pillar in the pension from the first pillar by age cohort and selected salary class (men) (in %)*



*Source: Majcen et al., 2020.*

*Figure 20: Group 2 – Share of the annuity from the second pillar in the pension from the first pillar by age cohort and selected salary class (women) (in %)*
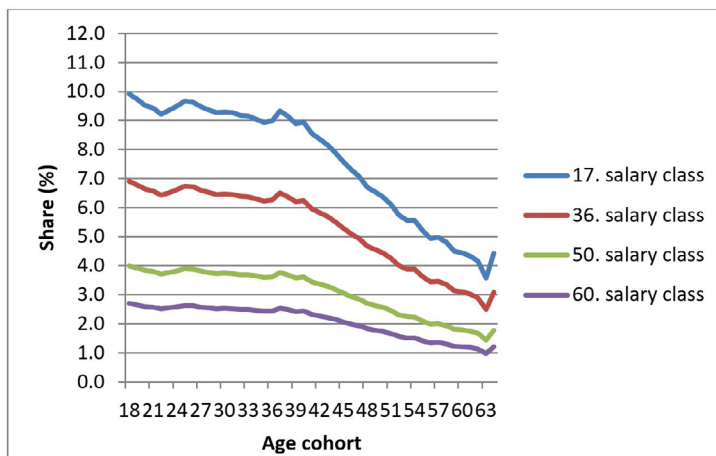


*Source: Majcen et al., 2020*

The importance of annuities, expressed as a share in the pension from the first pillar, decreases with the increase in salary classes. For example, for a male individual from the first age group and the 17th salary class, the annuity represents 10.4% of the pension, while in the 60th salary class, it only amounts to 2.8%. At the same time, the results also point to the fact that the uniform premium in the higher age groups causes a significant reduction in the share of annuities in pensions, e.g., in the 36th salary class from 7.2% (for male individuals who are in the first age cohort) to 2.9% (for male individuals who are in the 60th age cohort).

## 5.3  THE SECOND PENSION PILLAR – THE COMPULSORY OCCUPATIONAL PENSION SCHEME FOR WORKERS IN ARDUOUS AND HAZARDOUS JOBS[9]

The compulsory occupational pension scheme for workers in arduous and hazardous jobs is carried out within the framework of the Mandatory Supplementary Pension Insurance Fund (Sklad obveznega dodatnega pokojninskega zavarovanja – SODPZ), a mutual pension fund managed by Kapitalska družba pokojninskega in invalidskega zavarovanja, d.d.

Workers in arduous and hazardous jobs (WAHJ) are recognized in the Slovenian legislation with separate pension rules and special pension schemes. An explicit list of arduous or hazardous jobs was established in 1969 (The Augmented Retirement Benefits Employment Act, 1969) and is still applicable without additional changes.

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9   This chapter is based on:
  › Majcen B., 2016.
  › data from the Government of the Republic of Slovenia, 2022.
  › data from Kapitalska družba pokojninskega in invalidskega zavarovanja, 2022.

The first major change was introduced by the pension reform in 2000 (ZPIZ-1). The existing use of the insurance period with a bonus for the WAHJ was gradually abolished, and compulsory supplementary pension insurance in the second pillar for the WAHJ was introduced. Existing WAHJ were divided into two groups. The first one entailed WAHJ who completed no less than 25 years (men) or 23 years (women) of pensionable service on January 1ˢᵗ 2001, which remained in the old regime (first pillar), including the insurance period with a bonus and adequate lowering of the retirement age as requirements to an old-age pension. The second one, including the remaining WAHJ, was moved from the first pillar into the second pillar, which provides an occupational pension to bridge the labour market exit and the onset of an old-age pension. The added pensionable period, equal to one quarter of the period of their membership in the Occupational Retirement provision, replaced previous insurance period with a bonus.

Facilitating the early labour market exit was kept in the reformed pension system (ZPIZ-1), but with stricter conditions due to a gradual increase in the minimum pension age, unified insurance bonus, unified contributions rate, and the condition of sufficient contributions collected. It turned out that the last condition presented an almost insuperable obstacle to obtaining an occupational pension. Later, the pension reform (ZPIZ-2) further tightened the retirement conditions for all workers, including the WAHJ, which included amendments like the increased pensionable service, increased and unified minimum pensionable age for both genders, and abolishing the reduced occupational pensions. Additionally, it also introduced some changes regarding the resources that must be collected in individual accounts (increases to the lowest occupational pension, capping the highest one, and the introduction of the solidarity reserves). The list of arduous or hazardous jobs has not been changed, the jobs are still classified into five classes according to the degree of work difficulty and harmfulness or the nature of the work itself. All jobs, regardless the class, are subject to a uniform contribution rate, which is currently (in December 2022) set at 9.25%, and the base for contributions is the same as the base for the first pillar contributions, i.e., gross salary and salary compensations.

However, the retirement conditions still depend on job classifications, since the criteria for acquiring an occupational pension are twofold.

1. The sum of the years of pensionable service and the added pensionable service must be at least 42 years and 6 months, and the funds collected in the personal account have to suffice for the payment of occupational pension.

2. The sum of the years of pensionable service and the added pensionable service must be 40 years, the funds collected in the personal account have to suffice for the payment of occupational pension, and a certain age reached relevant to the job class:

   › For periods when the insured individual is not entitled to professional insurance, the age is 60 years or the age referred to in the fourth or fifth paragraph of Article 27 ZPIZ-2

   › For class 1 jobs, the age is 56 years;

   › For class 2 jobs, the age is 55;

   › For class 3 jobs, the age is 54;

> › For class 4 jobs, the age is 53;
>
> › For class 5 jobs, the age is 52.

The occupational pension is paid until the fulfilment of conditions for the acquisition of an early retirement pension or an old-age pension under compulsory insurance. To retain the same amount of pension also when receiving the pension under the compulsory pension and disability insurance, the insured person has to purchase years or join the Compulsory Insurance on a voluntary basis (for the period of the added pensionable service).

The occupational pension is calculated according to the amount of accumulated funds in the insured member's personal account, namely at least the amount of the old-age pension which the insured member would have received from the first pillar for 40 years of the pensionable service, increased by the funds of the health insurance contribution and expenses of the fund administrator (minimum amount of occupational pension), but no more than the amount of the old-age pension calculated from the maximum pension base, increased by the funds of the health insurance contribution and expenses of the fund administrator (maximum amount of occupational pension).

In some cases, insured persons have the right to receive the redemption value of the funds collected in the personal occupational insurance account in a lump sum (e.g. if assets in their personal occupational insurance account do not exceed EUR 5,000). An insured person who fulfilled the conditions for the old-age pension, the early retirement benefit, the widow's pension or the disability pension prior to enforcing the right to an occupational pension:

> › has the right to the pay-out of the contributions collected to his/her personal account up to EUR 5,000 or
>
> › may request that the funds are transferred free of charge to the supplementary insurance where he/she will acquire the right to a supplementary pension.

The compulsory occupational pension scheme for workers in arduous and hazardous jobs is carried out within the framework of the Mandatory Supplementary Pension Insurance Fund (Sklad obveznega dodatnega pokojninskega zavarovanja – SODPZ), a mutual pension fund managed by Kapitalska družba pokojninskega in invalidskega zavarovanja, d.d.

In January 2022, 49,105 policyholders were included in the compulsory occupational scheme for workers in arduous and hazardous jobs, and the net value of the fund was EUR 877.7 million.

Regarding the policy mix concerning the end of career options and innovative policy measures targeted at WAHJ, there are no prolonging working life schemes or specific active labour market policies. Nevertheless, changes implemented by the latest two pension reforms had an important effect on narrowing the early retirement pathway of the WAHJ as compared to other pensioners. It is evident from the available information that the early retirement pathway for WAHJ was mainly replaced by the possibility to pay out the contributions collected in their personal account (as a single payment) and/or having supplementary pension insurance.

One of the most important issues – the evaluation of the existing list of arduous or hazardous jobs and the determination of jobs that qualify for occupational insurance along with its related activities – finally came to the focus of the Slovenian government, which opened the public debate with issuing the White book on pensions in 2016, but the problem still remains unsolved. The related activities include a) determination of the basic purpose of occupational insurance, b) reasoning for the differentiation between individual jobs concerning the retirement conditions, and c) binding of the acquisition of the right to the condition of sufficient resources. The realisation of this major issue will decrease the number of newly insured persons and people will turn back to the early retirement pathway. Nonetheless, a comprehensive study of the WAHJ is urgently needed, as is the analysis of the impact of work on the employees' health for all existing jobs in occupational insurance.

# 6    THE SECOND PENSION PILLAR – SUMMARY

All parts of the second pension pillar: the voluntary supplementary pension insurance as well as mandatory supplementary pension insurance for civil servants and workers in arduous and hazardous jobs present a rather small part of the Slovenian pension system as compared to the first pension pillar.

The latest changes to the pension system, which apply from January 1st 2020, also emphasized the first pillar. They increase the old-age pension for men by 10.9% and women by 9.2%, which will significantly increase public financial expenditure on pensions expressed as a share of GDP. Estimates show that expenditures should reach their maximum value in 2055 when pension expenditures will be higher by 1.6 percentage points of GDP compared to the situation before this change. The net replacement rate (NR), considering pensions for 40 years of the pensionable period from the first pillar and assumptions regarding the amount of the net salary for the younger age cohorts reaches 64% and 66% (for men and women, respectively). The NR for insured persons, who also pay premiums themselves and, therefore, have a correspondingly lower net salary, reaches 65.9% for men and 68.3% for women in the younger age cohorts.

Analyses of the current collective VSPI system presented in this chapter are implemented for two groups of policies – in the first group, only the employer pays the premium, while in the second group, both the employer and the employee pay the premium. The results show that assuming payment of the premium by employers for the entire period of employment, men employees can expect an annuity upon retirement that will increase their pension from the first pillar by 18% (16% for women). The pension increase with the inclusion of the annuity is much higher for the group where both employers and employees pay premiums, as it reaches 28% and 24% (for men and women) in the younger age cohorts.

Annuities also raise the values of the net replacement rate for younger age cohorts to 75% (for both genders) in the first group of insured persons and to almost 85% in the second group of insured persons.

For those actively involved, the results show an encouraging figure indicating the importance of the current collective VSPI system, as annuities improve the adequacy of individuals' post-retirement incomes. Here, we must be aware that only those individuals who are in the VSPI system will receive higher incomes. Currently, there are very few younger policyholders. In any case, the basic problem is not only in the amount of premiums paid, but in the short period of paying premiums and the too low share of insured persons in the total number of employees. If the structure of insured persons by age does not change significantly, the average increase in the replacement rate for the entire population of insured persons will be much lower.

The average share of all active VSPI policies in 2017 only slightly exceeded 20% (men), while for women it was even lower (17.9%). Inactive policies remain a challenge, as well as the fact that individual insured persons can have several policies. More precisely, VSPI coverage could only be calculated based on data on insured persons – due to the duplication of policies the coverage is very likely lower than the shares covering active and inactive policies collectively (33.7% for

men and 29.3% for women). In addition to low coverage, it is also necessary to point out the low coverage rates in younger age cohorts, which has a significant impact on correspondingly lower accumulated funds and annuities.

The already mentioned amended pension legislation, effective since January 1st 2020, reduces the relative importance of the KPSJU annuity by raising pensions from the first pillar. Group 1 included civil servants who were employed in the public sector when the fund was established and had positive accumulated funds and paid premiums for each year as of December 31st 2017. The importance of the annuity, its share in the pension, depends on the amount of the pension for each individual premium class and is higher for civil servants who are in lower salary classes (e.g. for an individual from the first premium class and the 17th salary class, the annuity represents 10.4% of the pension, and in the 60th salary class only 2.6%). At the same time, the amount of the annuity and its share in the pension in the higher premium classes are falling, as the higher premiums in the higher premium classes do not fully compensate for the loss of the accumulated funds due to the shorter period of paying premiums.

Group 2 includes individuals who were employed in the public sector after the foundation of the fund and had an active policy on December 31st 2017, so they were all classified in the first premium class. The amount of the premium is, therefore, the same for everyone and the amount of funds collected depends on how long they have been employed in the public sector. Considering the new pension legislation and the values of individual parameters, the reduced shares of annuity in the pension from the first pillar were to be expected. Since they were all classified in the first premium class, the reduction of the share of the annuity in the pension with increasing age was even more pronounced than in Group 1.

The necessity of achieving higher general coverage with the second pillar, as well as especially higher coverage for younger age groups, is undoubtedly the basic challenge of any new system of additional pension insurance. Unfortunately, the current regulation of the second pillar has no solution, which is reflected in the stagnant and insufficient coverage. The recent significant increase in the number of old-age pensions, and thus the importance of the first pillar, also gives an important signal to individuals regarding the adequacy of pensions and reduces the need for additional pension insurance. Therefore, it is necessary to reflect on the role of both pension pillars while simultaneously solving the long-term sustainability of the pension system, and adapting the healthcare, long-term care, education, and labour market.

# 7    CONCLUSION

The Slovenian pension system has historically followed the development of the area to which it belonged at the time. The establishment of the pension insurance system dates to the period before the First World War, while the first real social insurance was introduced in the Kingdom of SHS with the adoption of the Act on the Social Insurance of Workers in 1922. The period after the Second World War was characterized by decentralization and with it came the Pension and Disability Insurance Act, adopted in 1983, which already included some amendments retained in the current governing Slovenian legislature. After Slovenia gained its independence in 1991, a new Pension and Disability Insurance Act-1 (ZPIZ -1) was adopted in 1999, followed by the Pension and Disability Insurance Act-2 (ZPIZ -2) in 2012, the Act on amendments to the Pension Act and the Disability Insurance Act ZPIZ-2C in 2017, and ZPIZ-2G in 2019. Effectively, all changes were determined by the fluctuating demographic trends and introduced the tightening of retirement conditions.

In 2022, the Slovenian pension system thus consists of two pillars. The first pension pillar is the classic Bismarck defined benefit pension system (PAYG), a mandatory pension and disability insurance system implemented by the Pension and Disability Insurance Institute of Slovenia (ZPIZ).

The second pension pillar consists of mandatory and voluntary supplementary pension insurance. Voluntary supplementary pension insurance can be held either in the form of individual insurance, whereby the individual joins a pension plan and pays the premium, or collective insurance, whereby the individual enters the policy through his or her employer, who finances all or part of the insurance for all employees. It is encouraged through tax relief, which is a crucial advantage over other forms of savings.

The mandatory supplementary pension insurance includes occupational pensions for workers in arduous and hazardous jobs, which cannot be performed successfully after a certain age, and a mandatory occupational pension scheme for public employees regardless of the nature of their jobs.

Despite the relatively high involvement in voluntary supplementary pension insurance and the mandatory involvement of all workers in difficult and dangerous jobs and civil servants, the sizes of pensions from the second pillar are relatively modest, the first pillar plays a major role.

The first pillar, based on the PAYG principle, is subject to extensive demographic changes. The current ratio of contributors to pensioners is 1.57 to 1, and projections predict a levelling off in the next 20 years. Despite relatively high social security contributions, the first pension pillar already depends on transfers from the state budget in the amount of 16.5% (in 2022), and in the future, we can witness an additional increase in these transfers. According to the latest projections of the European Commission, published in 2021, further increases in public pension expenditures are to be expected. They are supposed to increase from 10% of GDP in 2019 to 16% in 2070, and 15.7% by 2050. The growth of pension expenditure is projected to be mitigated by the increase in employment rates, especially in the higher age groups before retirement. However, this positive impact will be largely neutralized by the increase in accrual rates for calculating pensions that have been introduced in 2020. This measure will increase the pensions of new pensioners by about 10%, but it will also put significant additional strain on the long-term sustainability of the public

pension system. In the next few decades, the largest threat turns out to be the absence of positive net migrations, which Slovenia was facing in the past and are also assumed for the future. On the other hand, the greatest positive impact on the long-term sustainability of the pension system is shown by the increased employment rates at higher ages (60 and overs) or by linking that increase in the retirement age to the increase in longevity.

The design of the Slovenian pension and social security systems prevents great negative pressures on the future adequacy of pensions. However, the adequacy challenge concerns especially pensioners with incomplete or short working careers, the self-employed, those working in intermittent jobs, and those with a low contribution density. As the number of persons working part-time or on fixed-term work contracts increased during the financial and economic crisis, the adequacy problem will be extended in the future years.

With the 2019 amendments to the Pension and Disability Insurance Act, the importance of the first pension pillar was increased at the expense of substantially decreasing the long-term sustainability of the pension system. In designing the new pension reform, the Slovenian government will have to search for equilibrium on the importance of pension pillars, making coordinated actions in many areas, such as education, healthcare, long-term care, and the labour market, in order to effectively implement the new pension reform in practice, with the final aim of creating a financially sustainable system that enables adequate pensions to all pensioners.

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